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Dr. W. R. Pugh Comes to Van Diemen's Land.

When the barque *Derwent*, of 360 tons, reached Hobart Town on December 11, 1835, her passengers included Mr. H. and Mr. J. Nicholson, Lieutenant R. Wettenhall, his wife and two children, Captain and Mrs. Tregurtha and Dr. W. R. Pugh. The last mentioned had kept a journal for the period of the voyage and a few months after. Extracts from this interesting narrative have been printed.[4] While we learn that the passage took four months, the minor happenings on shipboard were of no great interest. Pugh was not impressed by the western coast, when the sun dispersed the mists and gave the passengers their first view of Van Diemen's Land. D'Entrecasteaux Channel and the river Derwent he found more attractive. The ship came to anchor in Sullivan's Cove at midnight, and he describes the situation of the harbour in the early morning, with some twelve to fourteen ships at their moorings, as strikingly beautiful. In spite of letters of introduction, his first days in the colony were far from encouraging; indeed, he writes as follows:

> . . . never did I feel in such complete solitude in the hands of my fellow men. Everyone I meet casts a suspicious glance and passes on. Never was a man more at a loss what to do than I am. 16,000 miles away from those on whom I have become accustomed to rely when in difficulty; possessed of neither the money to permit me to remain idle nor having a profession likely to avail me. Now do I wish I had passed my youth in some business . . . . I had then been differently circumstanced.

It is evident that the medical profession did not encourage casual arrivals to remain and practise. So after a stay of three weeks, during which he climbed Mount Wellington and gloried in its strange flora, Pugh left for Sydney. Here he noted that "at every step you sink ankle deep in the sand", while prospects, especially in the medical profession, were no more encouraging than at Van Diemen's Land, to which he promptly returned. Deciding to visit the north of the island, he set off on foot, believing that in that manner more of the country could be seen *en route* and that inquiries would be facilitated. With him went his shipboard companion, Mr. Harry Nicholson. After an early start on the first day, 39 miles were covered to the London Inn, where they stayed for the night. The next halt was at "Woodbury", Antill Ponds, as guests of Mr. Harrison; then to "Mona Vale", where Mr. William Kermode insisted on a short stay. Here, when discussing prospects in the medical profession, Pugh was informed that he had brought his knowledge to a bad market; few doctors were required, as numerically they were greatly in excess. Next day, however, a fellow guest, Major Lord, kindly assured him that he could make a living in Launceston. Leaving Mona Vale and passing through Ross and Campbell Town, the travellers passed the night "at a small inn in the middle of the forest where the accommodation was horrible". From this "hovel" the companions made their way through Epping Forest to the homestead of J. Helder Wedge, who told them of the new settlements to be formed at Port Phillip, with which he was closely concerned. Indeed, he went so far as to offer Pugh an appointment as medical attendant to the proposed expedition at 10s. *per diem*. This offer was not accepted and the journey was continued to Norfolk Plains. His then host, Mr. William Archer, urged the advantages of sheep farming; but Pugh, possibly confused by so much advice, gave up his journey by foot, procured a pony, and pushed on to Launceston. Here he was introduced to Dr. Learmonth,[1] a young man who had arrived one month before and of whom he writes: "His family being very influential gives him hopes of getting something to do".

The little town at this date is best described in Melville's words.[4]

> Launceston has an elegant and capacious church, Government House, military barracks, gaol, court house, school and other public buildings although sadly disproportioned to its rapidly growing importance. The town is admirably adapted for commerce, being capable of loading, as it frequently does, vessels of 400 tons burthen and upwards, with wool and other exportable articles. It is calculated to contain upwards of 2000 inhabitants, many of whom are spirited, thriving and industrious traders; and being, as it is, the key or granary of a fertile country of great extent, both its imports and exports are very considerable. Among its public establishments may be enumerated a bank, post office, several inns and two weekly newspapers, which are supported in a very creditable manner. The disadvantage under which it chiefly labours, however, is an inadequate supply of fresh water; but plans are in contemplation, and have long been so, by which this might be remedied.

Although there were already five medical men at Launceston as well as several in its neighbourhood, Pugh was sufficiently confident to become engaged to be married and to commence practice there. His choice was a fellow passenger of his recent voyage. In his own words, he "was able to overcome her reluctance to an engagement".

> . . . here in Launceston I think I shall take up my abode, as when I am married I may stand some chance, as independent of the advantage my being married will give me over single men the ——'s connections are very numerous and the most respectable . . . . I have determined to go to Hobart Town next week to get my things shipped to this place, where I hope to get a house two doors from Dr. Learmonth's.

So on May 13, 1836, Pugh and Cornelia Ann Kirton, daughter of a London solicitor, were married at Saint John's Church.

Little is known of Pugh's first years of practice. An appointment as health and immigration officer for the town came his way in 1841. In the same year he was gazetted a member of the Court of Medical Examiners for the colony,[1] and two years later he was appointed to the Commission of the Peace. An indication of his social and scientific inclinations at this period is given in a work published more than forty years afterwards.[5] Its author, Deputy Inspector-General R. M'Cormick, at this time was medical officer and geologist to Her Majesty's Ship *Erebus*, which, with Her Majesty's Ship *Terror*,[2] was refitting at Hobart Town, before making the thrust to the south that resulted in the discovery of Victoria Land and the Ross Sea. Dr. M'Cormick had travelled by coach with Mr. Justice Montague to Launceston, in order to enlarge his knowledge of the geology and economy of the interior of the island. He records in his journal of October 15, 1840:

> Breakfasted at Government House, called on the Friends, and at Dr. Pugh's, where we found Count Strlecki [*sic*] at breakfast. I took a stroll through the town, a neat quiet place, containing some good shops, an exchange and news room, both of which I visited. It is a smaller and less bustling town than Hobart Town, but situated in the midst of a fertile country. Vessels lay close alongside the wharfs.

M'Cormick's fellow guest will be remembered as Count Strzelecki,[3] the famous geologist, then collecting data in the colony for his "Physical Description of New South

[1] Dr. John Learmonth was in partnership with G. MacKillop in Hobart Town in 1835. He left Van Diemen's Land for Australia Felix, where he arrived in January, 1838. He is shown as at Marrabool, Geelong, from 1838 onwards.

[1] The Court of Medical Examiners, the first of its kind in the Australian colonies, was constituted by I Vic. Number 17 of 1837. It consisted of the principal medical officer and six members. The Court had power, *inter alia*, to examine young men who had been previously apprenticed to local practitioners, and if they were approved, grant them licence to practise in the colony. It also scrutinized the qualifications of newly arrived practitioners and granted letters testimonial to enable them to practise. It still functions as the Medical Council of Tasmania.

[2] The Antarctic expedition of Her Majesty's Ships *Erebus* and *Terror*, under the command of Captain James Clark Ross and Captain Crozier, made Hobart Town the southern base during the voyages of 1839 to 1843. For its use, the Rossbank Observatory was set up in the grounds of Government House, and there a long series of records relating to terrestrial magnetism were made.

[3] Sir Paul Edmund de Strzelecki, better remembered as Count Strzelecki, for more than five years conducted geological research in New South Wales, Gippsland and Van Diemen's Land. Two years were spent in Tasmania in close association with Sir John Franklin and the Tasmanian Society. Although he found evidence of gold in New South Wales, when told by Sir G. Gipps that such news would cause a breakdown of control of the penal population, he suppressed the publication of his discovery, even in the work mentioned above.

Wales and Van Diemen's Land", which was published in 1845.

Dr. Pugh's resignation of his health appointment in 1844 was possibly the result of an accusation of neglect of his patients, made in the previous year. Of the extraordinary charge brought against him by young Dr. Haygarth in June, 1842, in which it was alleged that by "gross negligence, ignorance and rashness", he had some months earlier brought about the death of one of his patients, Dr. Craig has already written.(6) It need only be said that in an action at law Pugh was completely exonerated and indeed eulogized for the action he had taken. There is a record of a partnership with Dr. James Grant in 1838.[1] The late Mr. Henry Button made this short reference to it:(7)

> For some time Dr. Pugh was in partnership with Dr. James Grant, and both having a scientific turn, they were constantly engaged in experiments. Many of the drugs used in their dispensary were prepared by themselves, from plants which they grew for that purpose.

It is also recorded by Button that Pugh used coal gas as an illuminant in about 1844 and long before its general employment in Launceston. "He built the large house at the corner of Frederick and Charles Streets,[2] and provided the necessary appliances for producing sufficient gas to light the whole premises." In 1846 he analysed for the Agricultural Society different varieties of wheat grown in the vicinity of Launceston. These were condemned as deficient in gluten.

Pugh had been one of the earliest corresponding members of the Tasmanian Society, which after the formation of the local Royal Society was administered from Launceston. Here, under the guidance of R. C. Gunn, F.R.S., its meetings were continued and its journal produced. Pugh was probably one of the nine influential members who in 1848-1849 followed the example of Gunn and became members of the new organization. Reports of the meetings of the Tasmanian Society between July 1, 1846, and September 2, 1847, show Pugh to have attended regularly and to have contributed data on geology, botany and meteorology. These ranged from observations on a plant poisonous to sheep, cattle and horses at the Swan River, Western Australia, to an interesting description of spontaneous combustion in a cargo of copper ore in transit from New Zealand by the barque *Rookery*. There were also exhibits of such geological specimens as alumina from Ben Lomond, serpentine and graphite from nearer Launceston, guano from Lawrence Island and a collection of fossil shells from the secondary limestone at Black Brush. It is possible that his interest in geology is linked with the visits of Count Strzelecki and Dr. M'Cormick. In the Tasmanian journal monthly meteorological registers for Launceston appeared from June, 1847, to December, 1848; these were almost certainly his work. Abstracts from similar tables, under his name, were contributed to the first volume of the *Proceedings of the Royal Society of Tasmania*.

From the foregoing it will be clear that by 1847 William Russ Pugh was an outstanding medical practitioner and well fitted for the important part that he was to play in the events commemorated today.

Surgery in Launceston in 1846-1847.

Twelve years had brought great changes to Launceston. When Mr. J. H. Wedge spoke to Dr. Pugh of the impending settlement of Port Phillip, his forecast was quickly fulfilled. The expeditions of John Batman and John Pascoe Fawkner in opening up Australia Felix brought a great expansion in trade to the little town. The members of the Port Phillip Association, with their friends and associates, were in desperate haste to ship their stock and supplies in the small vessels available at the Tamar, first to Indented Head and afterwards to the infant settlements at Melbourne, Portland and Corio Bay. The Clyde Company, too, set their flocks on the hard road from Bothwell down the scarp to the main road and as far as George Town, whence they were shipped to the western districts. All was prosperity and expansion in the north; but, as so often happened in Van Diemen's Land, bad times were close at hand. Very early in the forties the boom may be said to have been over. The administrations of Franklin, Denison and Eardley Wilmot lacked the iron precision and control of that of Arthur. The probation system, with stations scattered over the settled and accessible parts of the island, resulted in large gangs of convicts being herded together in idleness and vice. While it is true that a certain amount of essential work such as road building and bridge making was done, for the most part the system was wasteful and inefficient. It may be said that the free settlers and especially the landowners detested this new system and looked longingly backward to when

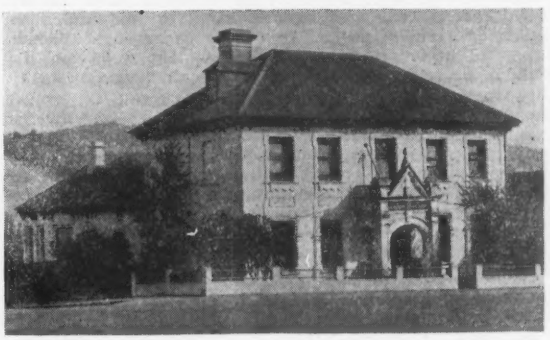

FIGURE I.
Saint John's Hospital, Launceston, now "Morton House".

the better types of convicts had been assigned to their service. By the commencement of 1847, discontent was widespread; Van Diemen's Land had become the only destination for transportation from Great Britain, and in the agitation for its cessation, Launceston took a leading part. The columns of its two newspapers, *The Cornwall Chronicle* and *The Launceston Examiner*, were devoted to detailed description of the progress of the movement for the abolition of transportation and to the activities of the local committee.

However, space was found for other matters. Fortunately for the understanding of our medical history, excellent reporters kept a lively and appreciative eye on happenings of medical interest in hospitals, police court and even private homes. From the pages of these newspapers have come the details of the cases about to be described.

It will be apparent that Dr. Pugh had become an able and successful surgeon, who did not appear to resent the publicity given to his surgical ability and accomplishments. While this caused resentment and jealousy among his fellow practitioners, the profession of medicine then was not one for a weakling, and Pugh had now no doubts as to his vocation or ability.

The Launceston Examiner of March 3, 1847, describes his treatment of an accident to a child. The paragraph is headed "Gunshot Wound and Amputation at the Humero-Scapular Articulation".

> We noticed at the time of its occurrence an accident to Sarah Mayne aged 13 and described in the Australian Medical Journal of February 1. Accidentally shot while dragging a gun along by its muzzle, the removal of the

[1] James Grant, M.D., arrived at Van Diemen's Land in 1835 and was appointed Assistant Colonial Surgeon at the Launceston Hospital in the following year. He was interested in natural science and a prominent member of the Tasmanian Society. Taking up land in the far north-west of the island near the Arthur River, he farmed until 1856. Resuming his profession in Launceston in that year, he practised there and in its vicinity until his death (*circa* 1870).

[2] This old house still stands and is known as "Nelumie". When Mr. Button wrote the above, it was in the possession of Dr. Parker. Its last owner was Sir John Ramsey, who made it his home and consulting room for over a quarter of a century. Others who had lived and practised from it were Dr. Herbert Charworth and Dr. Hallowes.

> arm at the shoulder joint was decided upon. Though alive to the slightest movement of the limb, no sooner were the arrangements completed than she appeared to fortify herself for the severe trial, and it was not until the limb had been removed that the slightest indication of suffering could be detected. None would have supposed her to be other than an indifferent spectator of the proceedings.

Rather more than two months later (May 19, 1847) the same paper reported an inquiry into the circumstances of the death of Thomas Bishop. He had suffered from a cancer of the "face", which a charlatan known locally as "Doctor Gibbon" had agreed to cure for £5, payment to be in advance. The actual treatment proved to be no more than the application to the diseased area of fluid from a bottle supplied by him. This was to be painted on with a feather. Such was the agony endured by the victim that a friend called in Dr. Maddox[1]. Before doing so, he succeeded after a struggle with "Doctor Gibbon" in obtaining the bottle and part of its contents. Dr. Pugh, to whom it was handed for examination, found it to be oil of vitriol. The feathers having become charred, a piece of thick shirt soaked in the acid was substituted. From this drops of the acid were allowed to fall on the face. The sufferings of poor Bishop were stated to be indescribable, and the sensations caused were compared with such as would be produced by a red hot iron. Indeed, four men were required to hold him down in his delirium of pain. As was to be expected, hæmorrhage followed. It was controlled by Dr. Pugh and Dr. Maddox by pressure; after which Pugh was able to tie the vessel in the lower part of the neck. A second hæmorrhage ended the patient's sufferings. Post-mortem examination showed the external carotid artery to have been eroded. In his evidence, Pugh described the area to which acid had been applied as comparable to an anatomical model, with sloughing of the superficial tissues and exposure of the muscle layers and deep structures. At the conclusion of this damning evidence, the coroner committed Gibbon to stand his trial for manslaughter.

Dr. Pugh Contributes Reports of Surgical Cases to the Australian Medical Journal.

The first *Australian Medical Journal* was a monthly publication of twelve pages. It appeared at Sydney on August 1, 1846. Published at first by a syndicate, it very soon came under the proprietorship of one of their number, Dr. Isaac Aaron. After only four months its first editor, Mr. Brooks, resigned his position. This, we learn from the editorial of December 1, was due to "his necessity for rest and freedom from bodily and mental labour, consequent on protracted illness". The journal itself was short-lived, the final issue appearing on October 1, 1847. In the fifteen months of its existence it covered the period of the introduction of ether into the Australian colonies, and gave unusually detailed accounts of the work carried out at Sydney as well as that done by Dr. Pugh at Launceston and by D. J. Thomas, F.R.C.S., of the Melbourne Hospital, at the Port Phillip district.

To the first number of this publication, Pugh contributed a report entitled: "Compound Fracture of the Leg: Amputation—St. John's Hospital, Launceston". The patient, Evan Gwillim, aged fifty-seven years, had received his extensive injuries in a struggle with a constable, and had had to travel slowly in a cart sixteen miles to hospital. On admission he was still under the influence of liquor. When examined, the right tibia was found protruding three to four inches from the wound and the fibula to be comminuted. A portion of the projecting bone was removed with a common amputating saw, the wound extended and the broken bones placed in apposition. The limb was next supported on a Liston splint and an opiate administered. On the sixth day secondary hæmorrhage set in, and after a consultation with Dr. Benson the leg was amputated below the knee. Three weeks later Evan Gwillim was able to sit up for several hours with the stump reported to be healing rapidly.

The December number contained reports of two more cases. The first was an operation for strangulated scrotal hernia. The patient, a man, aged seventy-two years, was admitted to Saint John's Hospital with a history that the bowel had become incarcerated after a drinking bout. At operation a crucial incision was made and an abscess found in the impacted inflammatory mass. A quantity of offensive purulent matter escaped, which, it is stated, permitted the "contents of the bowel" to be passed back into the abdomen. The report continues as follows:

> . . . the patient was carried back to bed, a poultice applied over the seat of the operation and stimulants administered to arouse the exhausted powers. The operation was necessarily tedious, and the age of the patient unfitted him for so severe a trial.

(It must be remembered that in each of these three cases the surgical procedures were carried out without general

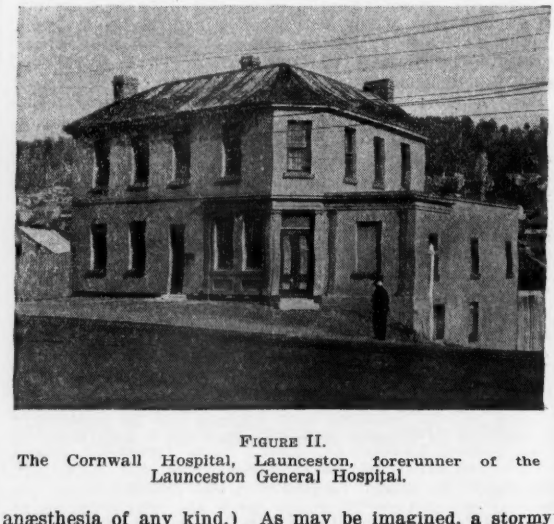

FIGURE II.
The Cornwall Hospital, Launceston, forerunner of the Launceston General Hospital.

anæsthesia of any kind.) As may be imagined, a stormy post-operative period followed. On the evening of the same day it was necessary to slit open the sac, when it was found that the bowel had given way, and fluid mixed with fæculent matter escaped. The opening was enlarged, a poultice of bread and yeast applied and a draught prescribed. In another seven days it became necessary to operate and improve drainage. Lastly, after two months, a fæcal fistula had to be remedied. To effect this, Pugh caused an enterotome to be constructed "after Dupuytren's plan", which he applied with a blade on either side of the septum of the opening. The closing of the instrument caused severe pain which continued for several hours and "which was but little relieved by the opiate administered". The procedure was most successful, and Pugh concludes his report by stating that only thirteen days after, the sides of the wound were in perfect apposition, the bowel was no longer visible and the stools were natural and well formed. It was indeed a result of which any surgeon might be proud.

In the same issue he reported a case of urinary calculus and operation for lithotomy. This patient, G.P., aged thirty-seven years, a shepherd at Portland, Port Phillip district, had nine months earlier been seized with an attack of agonizing pain in the penis and scrotum. "He applied to several medical gentlemen, but his health continued to decline; his nights were sleepless, his existence had become intolerable". Eventually he found his way

[1] George Francis Maddox, M.R.C.S., L.R.C.P., was born at Gibraltar in 1811 and arrived at Hobart Town with his father, A/Comr-General G. T. Maddox, on April 13, 1827. After serving his medical apprenticeship with Mr. William Crowther, M.R.C.S., he returned to England in 1837. Having passed the examination of the Conjoint Board of the Royal Colleges of Physicians and Surgeons, he returned to Van Diemen's Land in 1841 and joined the Colonial Medical Service.

to Pugh, who with a sound confirmed the diagnosis of vesical calculus, and decided to operate. The bladder was opened by the perineal route. Pugh's finger when inserted into the bladder reached the stone, which, however, did not yield to the pressure applied, nor could its position be changed. When the blades of the vesical forceps were with difficulty closed upon it, the stone broke into three pieces. These were removed and the bladder washed out. The stone—a triple phosphate calculus with a hollow centre—when fitted together measured in circumference 4·6 inches in the long axis and 4·4 inches in the short axis. Convalescence was assisted with opiates and leeches, and it is satisfactory to know that fourteen days after the operation the wound was contracting daily and the urine was occasionally discharging through the urethra. The following prescription is of interest. It was administered to the patient by Pugh on an evening visit to the hospital to counteract an effervescing "draft" ordered on the morning of the same day:

℞
Pulv. Opii gr. Iv.
Hyd. Chlor. gr. III.
Sapon. Hisp. gr. Iv
Misce & divide in pil II
1 hor. SUM. Et. Repet Si Opus Sit.

It must be remembered that in each of these three cases the surgical procedures were carried out without general anæsthesia of any kind. Had time permitted, these reports of Pugh would have been given in full. Both prose and style reflect his training and background. The careful descriptions of the diseases and their treatment convey a striking picture of the surgery of the immediate pre-anæsthetic period as conducted by an able and courageous practitioner. They bring also a realization of the stoical endurance of the patients and the character and skill of the surgeons who undertook their care and treatment.

However, it had not all been smooth sailing, for as was usual at the period and in so small a town, jealousy was rife in the medical profession. Dr. Pugh and Dr. Porter[1] were concerned in an incident which became the subject of the following leader in *The Cornwall Chronicle* of December 26, 1848:

> A spirit of hostility has, for a length of time, existed among the gentlemen of the medical profession, practising in this town, which has reached a degree of open and avowed animosity that occasions much inconvenience to the Public generally and calls loudly for its discontinuance. At present the sick patient may be compared to a football, kicked from one medical practitioner to another, and then to a third, and then—God knows where. It seems that two Medical Gentlemen have thought proper to dispute the character or ability or probably both of their brother professionists, and, if we are correctly informed, a similar feeling exists towards them, the result of which is that an objection exists, mutually, to meet each other; thus if a sick person being attended by one medical man—usually his family attendant—requests to have the opinion of another, he must discard the first, because, forsooth, he cannot meet in consultation. Instances have not been infrequent lately, when the sick room has exhibited a scene of disgraceful squabbling on the (perhaps) accidental collision of two or three of the fraternity, much to the distress of the invalid requiring medical assistance. We afford one instance which occurred during the past week, which will show that, even if real injury and loss of life have not been the result of this ill feeling yet that occasion is food for suspicion that it has and does and belief that gentlemen who can risk patients' lives to gratify a spirit of enmity, can possess few of the qualities of mind presumed essential to the successful practice of that honorable profession. A person named Godfrey recently came to Launceston for medical advice, put up at the Cornwall Hotel and called in Dr. Porter, who had attended on a former occasion for pulmonary disease, no gentleman, therefore, more calculated to afford him relief; feeling, however, that his patient might like to have his treatment confirmed by some other practitioner, Dr. Porter recommended that one should be called in. Mr. Godfrey expressed a preference for Dr. Pugh, who was immediately sent for, but, on hearing that Dr. Porter was in attendance, he refused to answer the calling, saying he preferred to adhere to his original resolution not to meet Dr. Porter. Dr. Porter after that said that he had no ill feeling towards any member of the profession, but that, in any case he would consider it his duty to forget it, retired and left Mr. Godfrey to the care of Dr. Pugh. That was on Monday last; on Tuesday P.M. he was removed to a private hospital kept by Dr. Pugh, but died on the following afternoon and was buried on Thursday. It is probable that Godfrey would have died at the Cornwall Hotel, but the removal was unsatisfactory in our opinion.

Looking back over the century, one would think such editorial comment more likely to foster and aggravate such differences than to compose them.

The First Use of Sulphuric Ether at Saint John's Hospital, Launceston.

At the commencement of 1847, seven medical men were in practice in Launceston—two, William Benson and G. F. Maddox, in the colonial service as surgeon and assistant surgeon respectively. The little town and its surrounding districts were served by two hospitals, a government institution housed in a two-storey building in Balfour Street, which was later destroyed by fire, and Saint John's Hospital at the corner of Charles and Frederick Streets.

Saint John's Hospital and Dispensary, opened on September 1, 1845, was subsidized by the government to the extent of £1000 annually, and for the rest depended upon its subscriptions. Managed by an influential committee, it had been founded to afford relief to subscribers and their families. Each single person paid 3d. per week, a married couple with a family 6d. All such payments were payable monthly and in advance. The medical officers (at its inception Dr. Pugh and Dr. Grant) are stated to have attended gratuitously. Saint John's Hospital was the counterpart of Saint Mary's Hospital at Hobart Town, which had been functioning successfully since 1841.

An event of extraordinary significance occurred when, on November 19, 1846, there appeared in *The Boston Medical and Surgical Journal* an article by Dr. Henry J. Bigelow entitled "Insensibility during Surgical Operations Produced by Inhalation". *The Lancet*, in its first number of 1847, printed a contribution by Dr. Francis Boott, which described the first use of the method in England. The ordinary Press, however, was slow to appreciate what had taken place at University College Hospital on December 21, when Mr. R. Liston had with its aid and without pain to the patient, amputated a leg and evulsed two toe nails. Some mention of the event was made in *The Daily News* on Christmas Day; but it was not until January 4, 1847, that it was noticed by *The Times*.

One would expect *The Lancet* to have been the harbinger of this discovery in Van Diemen's Land; but *The Boston Medical and Surgical Journal* and *The Times* appear to share that honour. It was *The Launceston Examiner* of June 2, 1847, that gave the momentous news under the title "Important Medical Discovery":

> Dr. Bigelow, one of the most eminent of the medical men of Boston, U.S., lately read a report before a society, upon the discovery of a perfectly manageable process of procuring insensibility to pain during surgical and dental operations. It is done by the inhalation of a prepared Ether, the composition of which is not disclosed, as it is covered by a patent; and accounts are given in the report of 8 or 10 of the severest surgical operations, during which the patient, rendered insensible by the inhalation, suffered no pain, but remembered the interval as a dream of indistinct pleasure. The great respectability of Dr. Bigelow, and the freedom with which the profession have been admitted to see the experiments, are mentioned as attesting the satisfactory completion of the discovery.

Elsewhere in the same number were extracts from *The Times* under the headline: "Painless Surgical Operations". Has ever such news been expressed so simply? *The Times* in its article made clear the wide and unhesitating accept-

[1] William Porter, M.D., arrived at Launceston in June, 1838, and practised there until at least 1846. He was granted letters testimonial to practise in the colony on January 19, 1841.

ance of the principle of surgical anæsthesia by the leading surgeons of London. Mention was made of the performance of lithotomy by Mr. C. Guthrie at the Westminster Ophthalmic Hospital before a distinguished gathering, among whom Prince Jerome Buonaparte and Lord Dalmeney had been especially invited. Mr. Guthrie completed the operation in three minutes with the removal of a large, rough stone. Four minutes later the patient awoke in bed, and in reply to questions said that he had fancied himself back among his boyhood friends in his native village of Norfolk. It is possible that this information was published to prepare the people of Launceston for the startling news of the successful use of ether in their own town, for this is what had actually happened two days previously. This description of what took place at Saint John's Hospital was printed in *The Launceston Examiner* of June 9:

FIGURE III.

Launceston in 1832. From a water-colour sketch by Lieutenant Lyttleton, of His Majesty's 73rd Regiment.

St. John's Hospital, Surgical Operations, The Influence of Ether.

We were present on Monday last, when the first surgical operations ever attempted in the Colony, while the patient was under the influence of Ether, were performed. Dr. Pugh had constructed apparatus similar to that figured in *The Illustrated London News*. It consists of two glass vessels, one placed on the other and both containing pieces of sponge saturated with Ether. Connected with the lower vessel is a flexible tube, provided with a stop cock etc., terminating in a pipe, which is placed in the patient's mouth. The upper vessel is fitted with a glass stopper, which is removed when the patient inhales, so that the air he breathes passes through the saturated sponges and becomes saturated with the Ether they contain. The Nostrils being compressed, the process of breathing is precisely as if a person inhaled and expressed the atmosphere through a tobacco pipe.

The first patient was a young female, who for upwards of two years had been suffering from disease of the lower jaw. In a few minutes the hands fell powerless, and the tube having been withdrawn, two double teeth were extracted, after which the tumor was removed, and a caustic applied to the bleeding. The operation under ordinary circumstances would have been excruciating and although the padding at the mouth of the tube did not exactly fit, and the full influence of the Ether was not experienced; yet with comparatively little pain the operation was effected. The patient described herself as falling asleep and intimated that the pain was not nearly so great as she had anticipated. She walked home shortly afterwards.

The next subject was a man afflicted with Cataract of both eyes. Fresh padding having been applied to the mouth of the tube, in a few minutes he was insensible. A small knife was passed into the eye and after its withdrawal a hook was introduced, with which the opaque body was removed from its situation. The patient remained in a state of insensibility for a few minutes, during which the motionless hand was pinched without producing the slightest sensation of pain. A little wine and water were then administered and the patient awoke to consciousness. He was asked if he felt any pain—he replied "Yes *now* I begin to feel some" —"Did you feel me while I was performing the operation?"—"Yes"—"Was it painful?"—"No". An attendant said that on a former occasion, when the same subject underwent a similar operation, he could not keep down the patient's hands, but in this instance he never attempted to raise them. He left the room cheerfully and appeared highly satisfied he had got through the business so easily. There is not a more delicate portion of the human frame than the eye, and the success of this experiment demonstrates that the recent discovery will save an incalculable amount of pain to the human family. In neither of these cases was the pulse perceptibly affected. Dr. Pugh was assisted by Dr. Benson in the performance of these operations, and both these gentlemen, as well as those present, expressed themselves as highly gratified with the result.

How well the whole scene is described, and how much essential information is compressed into this brief account! Possibly the editor, Mr. Jonathan S. Waddell, was himself present at the hospital to ensure a proper record of so remarkable an event.

In a little over a fortnight a lessening of this enthusiasm is evident. *The Examiner* of June 23, after a short notice of a successful operation at Her Majesty's General Hospital, Hobart Town, at which Dr. Agnew had used ether, passed on to another letter from Dr. Pugh. It will be seen from it that difficulties had been encountered in the further use of this anæsthetic:

> *To the Editor of "The Launceston Examiner"—*
> *Sulphuric Ether.*
>
> Sir,
>
> In a recent number of your Journal you noticed two surgical operations performed by me at St. John's Hospital, in which the recently discovered agent, Sulphuric Ether, was employed to render the parties unconscious and insensible to pain. The result of this trial was so far satisfactory as to lead me to hope that in future surgery would be ceased to be looked on with that dread which had been from the earliest times associated with its proceedings. I regret that my further acquaintance with this much lauded agent has tended materially to lessen its value in my estimation.
>
> I have found that its effects on individuals are as variable as the constitutions of those by whom it is inhaled. Persons weakened by previous disease are quickly brought within its influence, and those of feeble frame offer but little resistance to its action. Not so, however, with the hearty and robust; the stage of depression in such is deferred, and all the excitement common to excessive drunkenness is presented; the features become bloated and livid, the eye protruded and suffused, and the disposition of the party when inebriated is fully developed, and these effects are not of the transitory character they are reported to possess.
>
> The Brain remains confused, and the stupor of the drunkard is experienced for long subsequent to the application which occasioned it. I have seen sufficient to create alarm in my mind and would therefore caution the profession against the applying of the inhalation of Ether without special reference to the individual case. The remedy, like its twin brother, the Nitrous Oxide gas, is, I feel assured, destined to enjoy a short lived notoriety: their objectionable qualities are of a similar character, having alike a tendency to produce congestion in the brain, and therefore those circumstances which occasioned the removal of the Nitrous Oxide from the list of remedial agents, in which for a short time it held a high position, will in all probability deprive the Sulphuric Ether of a portion of the credit it has recently received.
>
> I have the honour to be,
> Your most obediently,
> Launceston, June 19th. W. R. PUGH, M.D.

How well those of us who have had to anæsthetize the "hearty and robust" will recall such experiences. In these early anæsthetics, as in the old world, the results of inhalation seem to have been only analgesia or at best partial anæsthesia. Indeed, in view of the absence of previous experience, of the improvised apparatus and in many instances of chronic alcoholics as patients, it is remarkable that as much was accomplished.

Communications to the Australian Medical Journal.

Already we have seen how efficiently *The Launceston Examiner* had informed the people of Launceston of the new discovery and its use. Pugh now turned to the *Australian Medical Journal* to give the medical profession of Australia the benefit of his experiences. In its twelfth number, dated July 1, 1847, the editor, Dr. Isaac Aaron, gave considerable attention to Pugh's experiences and to the question of surgical anæsthesia. First in importance was Pugh's letter in the column "Original Cases and Communications". After a brief introduction Pugh described with some additional detail the two cases already noticed by *The Launceston Examiner*, as well as this additional case (see Appendix):

> A.F. has stricture of the Urethra, he is a timid irritable person and could not be managed. The etherial inhalation was tried, but the pad of the mouthpiece being too small he inhaled air at the commissures of the lips and the sedative action of the Ether was in consequence not developed.

The editorial for the month, "Painless Surgery", was devoted to the topic of the day. It told its readers: "Since our last publication accounts of the effects of sulphuric ether have poured in from all quarters and loud has been the blowing of trumpets and great the jubilation and overwhelming the nonsense uttered and indited thereupon." Recent developments, particularly in Sydney, were noticed and editorial advice was proffered, to the effect that ether should be used not indiscriminately "but with caution, and only by or under the superintendence of medical practitioners". Then as it were "Stop Press", and on the front page, was the startling heading "The Etherial Humbug" (Figure IV). After a few observations from Dr. Aaron, suggesting that the editors of *The Sydney Morning Herald* "stick to the *last*" (sic), and assuring them that whenever they step beyond their legitimate province they only make fools of themselves, there followed an abbreviated version of the letter of Pugh which *The Launceston Examiner* had printed on June 19. In this, it will be remembered, Pugh expressed real concern and misgiving as to the future of ether. The editor found this partial retraction of Dr. Pugh much to his liking, as it supported views he had himself expressed in the June number of the journal. Lastly, and for all to read, under "To Correspondents", is this delightful reminder:

> Dr. Pugh is thanked for his communications of the 7th and 18th inst. but we must request that he will find some means of sending his favors free of expense to us, as under no circumstances can we afford to be taxed with postage. The newspaper Dr. Pugh mentions has not arrived.

No doubt the last reference is to *The Launceston Examiner*, and it is legitimate to wonder what the attitude of Dr. Isaac would have been had he known the communication to his journal had already had full publicity in the columns of that paper.

Other references to anæsthesia in the *Australian Medical Journal* do not come within the scope of this address, and the noteworthy contribution of Mr. D. J. Thomas, F.R.C.S., of the Melbourne Hospital, will doubtless be worthily commemorated elsewhere.

The Employment of Ether at Hobart Town.

Launceston was only a few days before Hobart Town in its use of the new discovery. The newspapers of the capital, as a whole, showed no interest, and it was left to Mr. William Gore Elliston, editor of *The Hobart Town Courier*, to take action. His paper on June 9, 1847, contained two brief articles, "The Etherial Antidote", and "The Use of Ether in Surgery". The first described the use of ether at Addenbrooks Hospital, Cambridge, the second its employment at the Bristol General Hospital. The next number reprinted in full and without comment the proceedings at Saint John's Hospital, Launceston. That there had been some local interest in the south is shown by this editorial comment:

> We have received a letter from New Norfolk, giving the result of an experiment made with Sulphuric Ether on a dog, by Dr. Weston[1] on Thursday evening last (June 10). The animal did not evince the slightest pain from any of the methods adopted to test the efficacy of the inhalation of the vapour, although they were of a severe kind. In half an hour after, upon a repetition of the experiment, and when the influence of the ether had ceased, the animal manifested the usual symptoms of pain.

Seven days later (June 19, 1847) Mr. Elliston described the first employment of ether at Hobart Town:

> *Inhalation of Ether.*
>
> On Thursday morning last a successful operation, under the influence of Sulphuric Ether, was performed

[1] Dr. J. Weston arrived at Hobart Town from South Australia in the schooner *Marys* in 1842. He was medical officer to the police and gaol establishments at New Norfolk, as well as in private practice there, between 1842 and 1849. There is no record of his subsequent career.

AUSTRALIAN MEDICAL JOURNAL.

EDITED BY ISAAC AARON, SURGEON, NEW SOUTH WALES.

VOL. I. SYDNEY, THURSDAY, JULY 1, 1847. No. 12.

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THE ETHERIAL HUMBUG.

THE following communication from Dr. Pugh was received too late for publication in the proper place. It is, however, so confirmatory of the opinions we expressed in the June number of this Journal, that we cannot forbear to give it a place at the expence of our advertising columns.

We do not war with individuals, except when we find them willingly and knowingly opposed to principles, and as we do believe Dr. M'Ewan perfectly innocent of the absurd article in the *Sydney Herald* of this day (28th), we shall take no further notice of so ridiculous a production, except to advice the Editors of that publication to "stick to the *last*," assuring them that whenever they step beyond their legitimate province they only make fools of themselves.

To the Editor of the "Australian Medical Journal."

Launceston, June 18, 1847.

DEAR SIR—The perusal of the various public journals in which the successful application of Ether in rendering surgical operations painless was described, induced me without loss of time to make trial of its efficiency, and in my first essay I was much pleased with the result. I have, however, from my subsequent experienc been induced to view the proceeding in a less favourable point of view, and having made the public, through your Journal, acquainted with my success, I shall by the first opportunity disclose the extent of my failure. I was inclined to advise the general adoption of the recently discovered principle. I would now desire to caution the profession against the employment of Ether inhalation in persons in any way disposed to apoplectic disease, or even to those of a full habit of body. I have arrived at the conclusion that if the effect be not immediately induced, a continuation of the inhalation cannot be pursued without danger of serious consequences.—The departure of the *Shamrock* will be immediate, I am therefore unable to write you at greater length.

Yours truly,

W. PUGH.

TO CORRESPONDENTS.

Dr. Pugh is thanked for his communications of the 7th and the 18th insts. but we must request that he will find some means of sending his favors free of expense to us, as, under no circumstances can we afford to be taxed with postage. The Newspaper Dr. P. mentions has not been received.

Our country subscribers are requested to take notice that Mr. Baker ceased to have any connection *whatever* with this Journal after the month of April last, and that all communications must be addressed to us direct, *prepaid.*

ERRATA.—In our last number, in the contents, and in page 128, line 23 from the top, for "Port Nicholson" read "Port Essington."

CHEMICAL LABORATORY,

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G. F. POOLE

BEGS most respectfully to apprise the Inhabitants of SYDNEY and Neighbourhood, that he has commenced business as CHEMIST AND DRUGGIST, in the Premises lately occupied by Aspinal, Hair Dresser,

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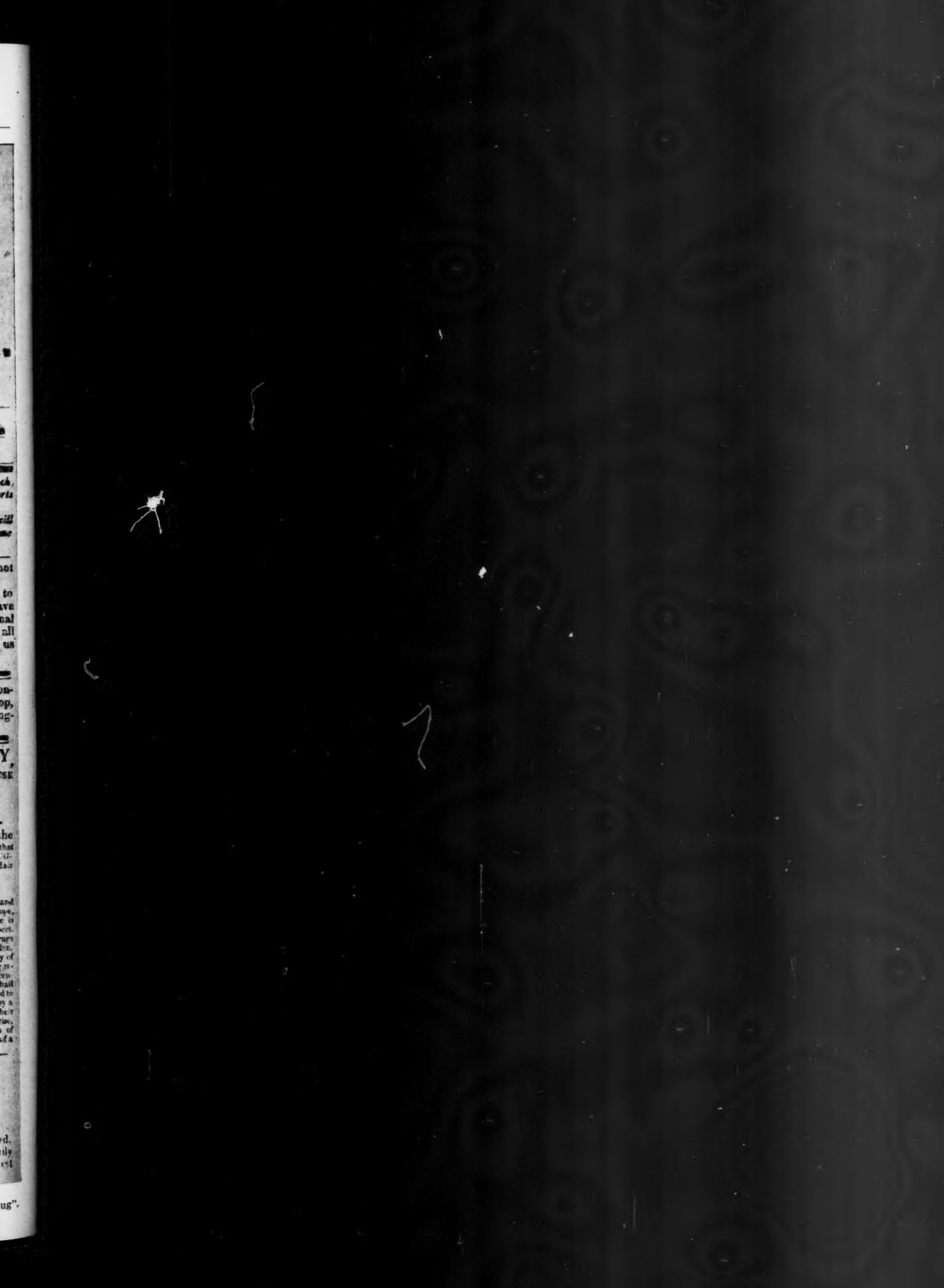
FIGURE IV.—The front page of the *Australian Medical Journal* for July 1, 1847, with its allusion to "The Etherial Humbug".



by Dr. Agnew,[1] in the presence of Surgeons McKay and McDonald, Asst. Surgeon Huish and W. R. Baylie, Esq., House Surgeon at Her Majesty's General Hospital, Hobart. The operation was one of the most painful character, even worse than the amputation of a limb. Without previous communication to the patient, the ether was applied by apparatus and the operation was proceeded with. After a few minutes inhalation, the nervous system was, as it were, brought to a complete standstill, and while under the hands of the operator there did not appear the slightest evidence of muscular action nor the least concern of sensibility. When all was over, and the patient returned to consciousness, he stated he had felt no pain and could scarcely believe the operation had been performed.

Stimulated by such happenings, or probably impressed by the work of Mr. Jonathan Waddell and *The Launceston Examiner*, the editor of *The Hobart Town Courier* on June 26 devoted nearly two columns to a sub-leader on anæsthesia. Mr. Elliston made the most of his opportunity. Garnished with excerpts from experiences in London, and with long descriptions of the apparatus employed in both dental and surgical procedures, the editorial also included an expression of opinion from "a medical practitioner" of Launceston. This can be no other than Dr. Pugh, who in a letter to Dr. E. S. P. Bedford "of this city" detailed the results of certain experiments. Although the effects were successful at first and in line with English observations they were, he wrote, in unsuitable cases accompanied by difficulties and evil effects. The editor made this comment:

> These simple facts will show the necessity of caution . . . lest human life should be made the sport of rash experiment and lest thoughtless curiosity or the benevolent wish to alleviate the suffering, lead to distressing catastrophes and unpleasant investigations.

For a while I had hoped to be able to record that my grandfather had had the signal honour of being the first to use ether in Australia. In *The Hobart Town Courier* of May 19, 1847, Crowther[2] is reported to have performed the operation of lateral lithotomy, some fourteen days before, on a boy, aged seven years. In view of the tender age of the patient and of the additional information that the operation, one of the first of its kind in private practice in the colony, was carried out in the presence of several medical men, it seemed very possible that a general anæsthetic had been used. However, a search through the files of other contemporary local newspapers disclosed no evidence to support this supposition. A second operation reported in the same paper on August 11 was for an inguinal aneurysm of extraordinary size. With the assistance of Dr. Lucas and Dr. McAndrew of the 96th Regiment and "in the presence of the principal medical gentlemen resident in Hobart Town", Crowther was successful in ligating the iliac artery. At the time when written it was stated that the patient was expected to resume his occupation as a gardener in a few days. Here again the use of ether is not specifically mentioned; but in view of the nature of the lesion and the intrinsic difficulties to be expected, it is reasonable to think that either Dr. Lucas or Dr. McAndrew administered ether in his capacity as assistant.

Help and encouragement came from an unexpected quarter when the Lord Bishop of Tasmania sent to the colony two sets of the apparatus used for the inhalation of sulphuric ether. The editor of *The Hobart Town Courier* on September 8, 1847, commented as follows:

> With an affectionate remembrance of his Colonial Charge and a desire to relieve the sufferings of many, to whom the new discovery is especially calculated to afford benefit, the Bishop has recently sent to Dr. Pugh, of Launceston, two sets of the requisite apparatus—one for his own use and one presented to Dr. Bedford. They are upon the most improved construction, and accompanied, with thoughtful care, by a supply of ether, in case there shall be any difficulty in procuring it here.

Two more descriptions of operations will be noticed before I close. In the one (*The Hobart Town Courier*, October 13, 1847) Dr. Bedford was the surgeon, and Dr. Casey[1] and Dr. Best were his assistants. The patient, aged about six years, was the son of James McWilliams, a whaler, and grandson of Mr. H. Mcginnis. The condition would seem to have been chronic osteomyelitis of the leg, and everything went well at the operation:

> The process of Inhalation, the removal of the limb and the dressing occupied but a few minutes—an interval of only a quarter of an hour having elapsed from the time the gentlemen of the faculty entering and leaving the house of Mr. McWilliams, where the operation was performed.

Three weeks later *The Hobart Town Courier* reported that the lad was almost recovered, the stump having remained healthy and healed rapidly.

Last to be mentioned is another case at Her Majesty's General Hospital (*The Hobart Town Courier*, November 12, 1847). With Dr. Seccombe[2] and Dr. McDonald as principals, and in the presence of several of their colleagues, the operation (not specified) was completed without "inconvenience to the patient", who was stated to be doing well. The occasion was especially noteworthy, as the apparatus employed had been prepared locally by Mr. Cane, of Elizabeth Street. His invention, considered to be an improvement on the machines used in England, was described in detail, and appears to have been an efficient and reliable instrument.

Conclusion.

With this excellent achievement, staged very probably on the top landing of the old hospital, the principals being representative of the Colonial Medical Service and the surgeon of the 96th Regiment and with medical practitioners of the town as onlookers, we may close the story of the introduction of surgical anæsthesia in Van Diemen's Land. The account of the initial use of chloroform, while of considerable interest, is of secondary importance and must await another occasion.

In the north of the island, Pugh continued his work for the community. A proposal of his that the government should erect a workhouse at Georgetown for aged and infirm paupers was rejected on the ground of its cost and its policy that such undertakings should be left to private charity. Again in 1848 he wrote to Bishop Nixon suggesting measures to be taken for the suppression of "special vice" at the probation stations. In support of his case it was mentioned that the returns of the criminal courts considerably under-estimated the incidence of this crime. All through the fight for abolition, Pugh was a strong opponent of transportation and associated with the local committee to bring about its cessation.

Little remains to be told. In 1849 he applied for leave, which was granted. The residents of Launceston at the time arranged that a testimonial be sent to the Colonial Secretary, commending his zeal and professional ability. Returning to the town, he practised again until his retirement in 1854. Before his departure to Victoria, friends and former patients presented him with a purse of sovereigns, in expression of their gratitude. On February 14, 1854, he and his wife left by the steam ship *Clarence* for Melbourne. Although a daughter was born to them

[1] James Wilson Agnew, K.C.M.G., M.D., emigrated to Van Diemen's Land in 1841. He was a member of the Colonial Medical Service at Tasman's Peninsula and in Hobart Town. Leaving the service and entering private practice, he became eminent in his profession. Premier and Chief Secretary in 1886, he was knighted in recognition of his services to the community. In the year 1888, at his own expense, he landed 400,000 salmon and trout ova in Tasmania and established these fish in our waters.

[2] William Lodewyk Crowther, F.R.C.S., son of William Crowther, M.R.C.S., arrived in Van Diemen's Land in January, 1825, with his parents by the ship *Cumberland*. He returned to England by the barque *Emu* in 1839 and qualified from the conjoined hospitals (St. Thomas's and Guy's). Born at Harleem, Holland, in April, 1817, he died at Hobart in the same month of 1885. He was sometime Premier of Tasmania.

[1] Dr. C. Gavin Casey arrived in Van Diemen's Land in 1832(?) and is shown as assistant surgeon of the second class at Port Arthur (1834). Transferred to New Norfolk in 1836, he had long service there and later at Launceston. He was evidently serving in Hobart Town by 1847.

[2] William Seccombe, M.D., arrived "in suite" to Colonel Arthur on May 14, 1824. He entered the Colonial Medical Service and served at Pittwater, Launceston (Government Hospital), from 1836 to 1839. He took up 1000 acres in the Winterton parish. He was presented with a silver snuff box by the people of Plymouth in recognition of his services during a cholera outbreak. He was appointed police magistrate at Campbell Town in 1855.

on April 13, 1838, there is no record of any descendants. Not even a likeness of him remains.

Tonight we honour William Russ Pugh as an outstanding member of our profession. He was a bold and resourceful surgeon as well as a man of scientific standing and high character. Since he had served Launceston and its community well and faithfully, it is most fitting that his name and achievements should be perpetuated by its citizens of today.[1]

Acknowledgements.

My sincere thanks are due to Miss A. Wayne, M.B.E., by whose patient and unselfish research so much essential information and so many references have been placed at my disposal; also to Mrs. H. F. Turner for permission to reproduce the sketch of Launceston, painted by her great-grandfather, Lieutenant Lyttleton, 73rd Regiment. The pictures of the early hospitals I owe to the kindness of Gordon Rolph, Esquire. Lastly, the Mitchell Library through Miss P. Mander Jones, its deputy librarian, has kindly allowed me to have access to its unique copy of the *Australian Medical Journal* and to have photostat copies made, one of which is reproduced.

References.

(1) N. J. Dunlop: "An Essay Relating Chiefly to Anæsthetics and Their Introduction to Australia and Tasmania", THE MEDICAL JOURNAL OF AUSTRALIA, Volume I, 1927, page 141.
(2) W. L. Potter: "Anæsthetics in Australia in the Early Days", THE MEDICAL JOURNAL OF AUSTRALIA, Volume II, 1938, page 940.
(3) "Voyaging to Tasmania One Hundred Years Ago", *The Illustrated Tasmanian Mail*, December 6, 1934.
(4) H. Melville: "The Van Diemen's Land Almanack", 1833, page 23.
(5) R. M'Cormick: "Voyages of Discovery to the Arctic and Antarctic Seas", page 128.
(6) C. Craig: "A Medical Pamphlet of 1845", THE MEDICAL JOURNAL OF AUSTRALIA, Volume II, 1941, page 266.
(7) H. Button: "Flotsam and Jetsam", page 128.

Appendix.

Original Cases and Communications.

To the Editor of the "Australian Medical Journal".

SIR: It may be of interest to your readers to receive local testimony, in addition to the published reports of cases, in which surgical operations have been divested of the usual suffering attendant on such proceedings by the use of Ethereal inhalation. I beg to furnish you with the results of a trial of this novel discovery, made at St. John's Hospital today, the results of which, although to a certain extent incomplete, were so far satisfactory as to justify an opinion that a large amount of the suffering hitherto experienced by patients may be superseded; and that many operations can be performed during the stage of unconsciousness, which is so readily induced. I employed a part of Nooths' apparatus in the manner delineated in the "Illustrated London News" of the 9th of June, and found it in every respect suited to the purpose.

Yours, most obedt.,
Launceston, V.D. Land. W. R. PUGH, M.D.
June 7, 1847.

CASE I.—Mrs. L. has been the subject of Epulis in the left side of the lower jaw, the tumor at present involving the posterior bicuspid and anterior molar teeth. Various applications have been made by the different medical gentlemen to whom she has applied, but the disease has of late become a source of annoyance, hæmorrhage to an alarming extent has occurred on two occasions, and the size of the tumor has greatly increased. The inhaling tube was placed in the mouth, and the nostrils were closed by a clasp over the bridge of the nose; after continuing the inhalation for about five minutes the arms fell powerless by the side. I then extracted the bicuspid tooth; this was attended with a slight motion on the part of the patient, and on extracting the molar tooth an involuntary exclamation escaped her; the diseased parts were dissected from their attachments to the lower maxilla, and the chlor zinc applied to suppress the hæmorrhage.

The inhalation in this case had the effect of reducing the amount of suffering to a limit which the patient acknowledged to have fallen far short of what she had fortified herself to bear. After reclining for a short time she walked home.

[1] In July, 1947, a plaque to commemorate the part played by Dr. Pugh was affixed to the wall of old Saint John's Hospital, and unveiled by the Honourable Alfred White, Member of the House of Assembly, Minister for Health.

CASE II.—John Bowen, aet. 60, has for long past been the subject of capsular cataract in both his eyes. Several operations have been performed with a view to the destruction or displacement of the opaque membrane; when operated upon he was an extremely troublesome patient to manage, and has been subjected to the required restraint with great difficulty. The inhaling tube was applied to the mouth, and after continuing the inhalation for about six minutes the effects began to appear, and in two minutes more the tube was removed from the mouth, the patient's head fell back on the person supporting him, the arms hung powerless by the sides, the legs had lost all power of resistance. The left eye was fixed without the slightest opposition.

An Iris scalpel was passed through the Cornea, and on its withdrawal a Cataract hook introduced into the anterior chamber and the opaque membrane dislodged from its position, thus completing the operation, during which all evidence of sensibility was absent; the patient's eye was closed, and he continued indifferent to surrounding objects; a glass of water was placed to his lips, and was drunk without an effort; this was speedily followed by restored consciousness. On asking the patient if he was in pain, he replied that his eye was getting a little sore, he had been free from pain during the operation, and although sensible that something was being done to his eye, felt no desire to oppose its continuance; he walked from the operation room cheerful and well pleased with the easy manner in which he had got through the operation.

CASE III.—A.F. has stricture of the Urethra; he is a timid irritable person, and could not be managed. The ethereal inhalation was tried, but the pad of the mouthpiece being too small he inhaled air at the commissure of the lips, and the sedative action of the ether was in consequence not developed.

NOTES ON A SERUM CONTAINING ANTI-LEWIS AND ANTI-c (ANTI-Hr′) ANTIBODIES.

By RACHEL JAKOBOWICZ, R. T. SIMMONS and LUCY M. BRYCE,

From the Australian Red Cross Blood Transfusion Service (Victorian Division) and the Commonwealth Serum Laboratories, Melbourne.

IN August, 1946, Mourant[1] reported a new blood group antigen, for which he proposed the name "Lewis" antigen.

When this report appeared we had under investigation the serum described in this note. Our earliest series of tests had led us to believe that the antibodies present were of the Hr′ type. Tests with a larger number of samples of red cells revealed, however, that the reaction of this serum could not entirely be explained by the presence of an anti-Hr′ agglutinin, since some of the cells agglutinated were Hr′-negative, and occasional samples of known Hr′-positive cells were not agglutinated.

A sample of the serum was sent to Dr. Mourant for his comment, as we had heard[2] that he had encountered two unusual varieties of serum which were possibly similar in nature to our serum.

The clinical history of the patient whose serum we investigated is as follows.

Mrs. M.P., aged fifty-five years, was admitted to hospital in March, 1946, with an atypical macrocytic anæmia, thought to be associated with intestinal malignant disease. Early in March, 1946, she had had one transfusion, with no observed reaction. On March 30 she was given a second transfusion which was followed by a severe hæmolytic reaction. The specimen of serum that we were asked to investigate was taken about eight days later.

The patient had had five children, all living, the youngest aged twenty-eight years. No history could be obtained of manifestations in the children suggestive of iso-immunization in the mother's pregnancies. The blood groups of three of the children (the other two not being available) were group O Rh_1 Hr′-negative, O Rh_1 Hr′-positive, and A Rh_1 Hr′-positive. The cells of the two who belonged to group O were not agglutinated by Mrs. M.P.'s serum. Apart from the normal iso-agglutinins, no antibodies could be detected in the serum of any of the three children.

The first donor's blood group was O Rh_1Rh_2. His cells were agglutinated by Mrs. M.P.'s serum, and the second

donor belonged to group O Rh_1 Hr′-positive, and her cells were agglutinated by Mrs. M.P.'s serum.

The results of serological investigations of the patient's blood were as follows.

Her blood group was O MN Rh_1 Hr′-negative (probably CDe/CDe). Her serum was tested against 200 samples of red cells, suspended in normal saline solution and incubated at 37° C. for thirty minutes. The agglutination observed was also obtained at room temperature. The results shown in Table I indicate that to some extent the serum resembled an anti-Hr′ serum. It agglutinated 67·8% of 143 samples of cells known to be Hr′-positive, but in addition it also

TABLE I.

Results of Tests Obtained with 200 Selected Samples of Group O Blood, Tested at 37° C. against Mrs. M.P.'s Serum.

Reaction of Cells Used, with Anti-Rh Sera.				Number of Cell Samples Tested.	Reaction of Cells with M.P 's Serum.	
C Rh′.	D Rh_0.	E Rh″.	c Hr′.		Positive.	Negative.
−	−	−	+	64	55	9
+	+	−	−	56	12	44
+	+	−	+	40	8	32
+	+	+	+	20	16	4
−	+	+	+	14	13	1
−	+	−	+	2	2	0
+	−	−	−	1	0	1
+	−	−	+	1	1	0
−	−	+	+	2	2	0
Total number: 200					109	91

N.B.—The serum also contains a cold agglutinin.

agglutinated 21% of 57 known Hr′-negative cells. No definite conclusions were drawn at this time as to the nature of the agglutinin or agglutinins present.

Some eight months later the serum was examined again. On this occasion suspensions of twenty samples of cells were made in albumin as well as in saline solution. The results are shown in Table II. In a third series of tests the cells of ten persons included in the initial series were reexamined, both saline and albumin suspensions being used. A comparison of the results obtained on the two occasions is shown in Table III.

TABLE II.

Results Obtained with 20 Samples of Group O Blood, Diluted in Normal Saline and Albumin Tested Against Mrs. M.P.'s Serum after it had been Stored for Eight Months at 5° C.

Reaction of Cells with Anti-Rh Sera.				Reaction of Cells with Mrs. M.P.'s Serum.				Number Tested.
				Cells Diluted in Normal Saline.		Cells Diluted in Albumin.		
C Rh′	D Rh°	E Rh″	c Hr′	Positive.	Negative.	Positive.	Negative.	
−	−	−	+	1	4	5	−	5
+	+	−	−	−	3	−	3	3
+	+	−	+	3	5	8	−	8
−	+	+	+	1	−	1	−	1
+	+	+	+	−	3	3	−	3
Total number ..				5	15	17	3	20

From these later results (obtained with the serum eight months old) it can be concluded that the serum contained two antibodies, one agglutinating approximately 25% of cells irrespective of their Rh antigens and the other an "incomplete" or "blocking" anti-Hr′ antibody. In a personal communication, Dr. Mourant informed us that this first antibody in our serum agglutinated the cells which contained his Lewis antigen, which in the paper referred to above[1] he reports as being present in approximately 25% of 96 samples of group O cells. In addition he and Dr. Race confirmed the presence of the "incomplete" anti-Hr′ (anti-c) antibody.

Discussion.

While all available evidence suggests that the anti-Hr′ agglutinin does not occur except as a result of immunization, less is known concerning the Lewis antibody which has so far been described in only two cases, in which there was no definite evidence of fœtal immunization of the mothers.[1] In our case fœtal immunization also seems unlikely, but as, unfortunately, no pre-transfusion sample of the patient's blood was available, we cannot definitely state that the antibody was absent before transfusion. Since, however, no reaction followed the first transfusion, and since the first donor's blood contained the appropriate antigen, it seems possible that, in this case, both antibodies were produced as a result of immunization.

The first donor was Hr′-positive, but since the Hr′ factor is not strongly antigenic, it seems unlikely that the first transfusion could have stimulated antibodies sufficiently strong to cause the production of the reaction resulting from the second transfusion. It is possible, however, since at least two of the patient's children were Hr′-positive, that sensitization had been initiated during a pregnancy

TABLE III.

Comparison of Results Obtained with Samples of Cells which were Tested with Mrs. M.P.'s Serum shortly after the latter had been Collected and after it had been Stored for Several Months.

Reaction of Cells with Anti-Rh Sera.				Reaction of Cells with Mrs. M.P.'s Serum.		
				Results Obtained with Fresh Serum.	Results Obtained with Stored Serum.	
					Cells Diluted in	
C Rh′.	D Rh_0.	E Rh″.	c Hr′.	Cells Diluted in Normal Saline.	Normal Saline.	Albumin.
+	+	−	+	Negative.	Negative.	Positive.
+	+	−	+	Positive.	Negative.	Positive.
+	+	−	+	Positive.	Positive.	Positive.
+	+	−	+	Negative.	Negative.	Positive.
+	+	−	+	Negative.	Negative.	Positive.
+	+	−	−	Negative.	Negative.	Negative.
+	+	−	−	Negative.	Negative.	Negative.
−	−	−	+	Positive.	Negative.	Positive.
−	−	−	+	Positive.	Negative.	Positive.
−	−	−	+	Positive.	Negative.	Positive .

and further stimulated by the first transfusion. We are not able, however, to decide whether the reaction which followed the second transfusion was due to the anti-Hr′ agglutinin or to the anti-Lewis agglutinin. Further transfusions with donors known to be Hr′-negative, whose cells were cross-typed with Mrs. M.P.'s serum, "Lewis-positive" cells thus being excluded, were not followed by reactions.

In the first series of 200 tests with cells suspended in saline solution, the serum gave reactions suggestive of those of an anti-Hr′ serum. In a second small series performed eight months later, such reactions were elicited only with cells suspended in albumin.

It is obvious, therefore, that during this period the anti-Hr′ (anti-c) agglutinating antibody disappeared, but it is not known whether the agglutinating antibody changed to the "incomplete" form, or whether the "incomplete" or "blocking" antibody was originally present.

During the course of these investigations another serum, obtained after a transfusion reaction, was examined by us. It was found to contain the anti-Lewis agglutinin. This serum will be fully reported by Dr. Vera Krieger, who kindly made it available to us for comparison.

Summary.

1. A serum containing unusual antibodies has been described.

2. One of these antibodies agglutinates 25% of all samples of cells tested, and appears identical with that active against the Lewis antigen described by Mourant. The other is an anti-Hr′ antibody.

3. The serum at first showed weak anti-Hr′ (anti-c) agglutinin, but after storage for eight months at 5° C. only "incomplete" or "blocking" anti-Hr′ agglutinins were detectable.

4. The evidence suggests that both antibodies were produced as a result of immunization by transfusion, although it is possible that sensitization to the Hr′ antigen could have been initiated by pregnancies with Hr′-positive children.

Acknowledgements.

We are greatly indebted to Dr. R. R. Race and Dr. A. E. Mourant, of the Lister Institute, London, for help in identifying the Lewis antibody and for much helpful comment, and to medical officers of the Alfred Hospital, Melbourne, for supplying us with this serum and with the medical history of the patient.

References.

(1) A. E. Mourant: "A New Human Blood Antigen of Frequent Occurrence", *Nature*, Volume CLVIII, 1946, page 237.
(2) G. A. Kelsall: Personal communication.

THE EXAMINATION OF GASTRIC CONTENTS FOR TUBERCLE BACILLI.

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IN the twelve months ended December, 1946, the gastric contents of 82 patients were examined for tubercle bacilli at the Anti-Tuberculosis Association's Chest Clinic, Sydney, and the detailed results are tabulated below. The tests were undertaken to establish a definite diagnosis, as 70 of the patients were unable to produce any sputum for examination, and no *Mycobacterium tuberculosis* could be found in the sputum of the other 12.

Procedure.

The patients were requested to attend at 9 a.m. after fasting from the night before. A Ryle tube was used in the tests, and the fasting juice only was examined; the stomach was not washed out in any way.

For the first four months of these tests, most of the patients had only one examination, but this was later extended to an examination on three consecutive mornings, except when the first specimen was found to contain a good number of acid-fast and alcohol-fast bacilli.

A point considered important in the obtaining of better results was that the whole of the fasting juice was extracted for examination, and not just a portion.

The specimens, when acid, were first treated with an equal amount of 4% sodium hydroxide solution, placed in the incubator at 37° C. for not more than three-quarters of an hour, and then neutralized with a 3·4% concentration of sulphuric acid, phenol red being used as an indicator. The procedure was carried out the other way round if the gastric juice was alkaline. Finally the specimens were centrifuged at high speed.

Schwarting,(1) in exhaustive tests, showed that the longer specimens were kept before being treated, the less satisfactory were the results, and Kramer(2) found that *Mycobacterium tuberculosis* inoculated into gastric juice was killed off after a few hours; therefore the objective aimed at was to have the deposits on culture media as soon as possible. The time lost by microscopic examination for possible tubercle bacilli was therefore eliminated (and in any case it was considered better to have such findings confirmed by cultural means); this examination was undertaken later. All deposits were put on to culture media with the least possible delay.

It was found that centrifugation at high speed (3000 revolutions per minute) gave the best results; fewer specimens became contaminated, probably because of the time factor, as ten minutes' centrifugation at this speed was found to be sufficient to give a good concentrate.

It was also found necessary to have a centrifuge with cups capable of taking from 40 to 50 millilitres, so that even a large specimen could be treated in one operation—again a saving of time.

All specimens were stained by both the fluorescent and the Ziehl-Neelsen methods.

The medium used, Jensen's modification of Löwenstein's medium, was made up in the laboratory, and any batch was discarded which did not give macroscopic colony growth within seventy-two hours after inoculation from a culture of *Mycobacterium tuberculosis*.

In the preparation of the medium non-fertile eggs were used, which were not older than three days.

Results.

The results were as follows. The patients tested numbered 82. (i) Of the centrifuged deposits, 25 (30·5%) were found to contain acid-fast and alcohol-fast bacilli morphologically resembling *Mycobacterium tuberculosis*, and also yielded cultures of characteristic colonies. (ii) Of the centrifuged deposits, 21 (25·5%) appeared to be free of acid-fast and alcohol-fast bacilli, but yielded characteristic colonies of *Mycobacterium tuberculosis* on culture. Thus, 46 (56%) of the 82 specimens contained *Mycobacterium tuberculosis*.

In addition to the above series there were another 10 cases in which acid-fast and alcohol-fast bacilli morphologically resembling *Mycobacterium tuberculosis* were found in the centrifuged deposits, ranging in numbers from an occasional bacillus to as many as 50 and more in two cases per microscopic field. In five of these cases no growth was obtained, one specimen became contaminated, and in the other four no macroscopic colonies were present, although examination of smears showed the presence of acid-fast and alcohol-fast bacilli, apparently dead, as they were not in increased numbers over the original findings. For the purpose of this report these cases have been tabulated as "negative". Most of these results were obtained in the first four months of the tests, when only one examination was made of each patient, and it is considered that if examinations had been made on three consecutive days the results might have been different.

Age Groups.

The ages of the 25 patients from the centrifuged deposits of whose gastric contents acid-fast bacilli were obtained, were as follows: nineteen years and under, four; twenty to twenty-five years, five; twenty-six to thirty-five years, seven; over thirty-five years, nine. Thus, 16 of these patients were aged under thirty-five years and nine were aged over thirty-five years.

The ages of the 21 patients in the centrifuged deposits of whose gastric contents no acid-fast bacilli were detected, but whose specimens yielded characteristic colonies of *Mycobacterium tuberculosis* on culture, were as follows: nineteen years and under, two; twenty to twenty-five years, three; twenty-six to thirty-five years, six; over thirty-five years, ten. Thus, 11 of these patients were aged under thirty-five years and 10 were aged over thirty-five years.

The ages of the combined total of 46 patients listed above were as follows: nineteen years and under, six; twenty to twenty-five years, eight; twenty-six to thirty-five years, 13; over thirty-five years, 19. Thus, 27 of the total number of 46 patients were aged thirty-five years and under, and 19 were aged over thirty-five years.

From these figures it will be seen that the patients harbouring the more active acid-fast bacilli, which were detected in the centrifuged deposit of the gastric contents, were inclined to be younger than the patients in whose

centrifuged deposit from the gastric contents acid-fast bacilli were detected only by cultural methods.

Blood Sedimentation Rate.

All patients had their blood sedimentation rate estimated, except where, for obvious reasons (such as pregnancy), it would be of little value. Westengren's method was used, the high normal of which is seven millimetres at the end of one hour (for females).

Of 24 patients whose gastric contents were found to contain acid-fast bacilli when the centrifuged deposit was examined, their presence being confirmed by culture, the blood sedimentation rates were as follows: one to seven millimetres in one hour, 15 patients; eight to 15 millimetres in one hour, three patients; 16 to 25 millimetres in one hour, five patients; above 25 millimetres in one hour, one patient.

Of 21 patients whose gastric contents were not found to contain acid-fast bacilli when the centrifuged deposit was examined, but yielded a growth on culture, the blood sedimentation rates were as follows: one to seven millimetres in one hour, 12 patients; eight to 15 millimetres in one hour, five patients; 16 to 25 millimetres in one hour, one patient: above 25 millimetres in one hour, three patients.

Thus, of the total number of 45 patients, the blood sedimentation rate of 27 was normal, of eight was moderately high, of six was high and of four was abnormally high. Therefore, the blood sedimentation of 27 patients was normal and that of 18 was above normal.

From these figures it will be seen that in the cases in which acid-fast bacilli were found in the centrifuged deposits of the gastric contents a slightly higher proportion of normal readings was obtained than in the cases in which no acid-fast bacilli were found in the deposits, but a growth was obtained on culture, and that the combined totals show that in the cases studied at this clinic, a blood sedimentation rate reading gave no indication of the degree of activity of the tuberculous process.

X-Ray Findings.

A record was kept of radiological findings in all cases, the last report prior to the tests being taken. The reports were made by four radiologists individually. Included among the patients were a few from a sanatorium, who had been under treatment for some time, whose lesions by all other tests were considered healed, quiescent or inactive, and who were patients the sanatorium desired to discharge. These patients have been classed under the heading "doubtful activity" in this report.

Of 25 patients whose gastric contents were found to contain acid-fast bacilli when the centrifuged deposit was examined, their presence being confirmed by culture, the X-ray findings were as follows. Eighteen patients were reported as having active lesions, possibly active lesions or possible cavitation. Two patients were reported as "doubtful", or as having lesions of doubtful activity. Five patients were reported as showing no lesions or no active lesions. Thus, 18 patients presented active or possibly active lesions and seven were recorded as "doubtful" or "negative".

Of 21 patients whose gastric contents were not found to contain acid-fast bacilli when the centrifuged deposit was examined, but yielded a growth on culture, the X-ray findings were as follows. Eight patients were reported as having active lesions, possibly active lesions or possible cavitation. Four patients were reported as "doubtful", or as having lesions of doubtful activity. Nine patients were reported as showing no lesions or no activity of lesions. Thus, eight patients presented active or possibly active lesions, and 13 were recorded as "doubtful" or "negative".

It will be seen from these figures that what can be termed the "more active" cases, in which the bacilli were found in the centrifuged deposit of the gastric contents, corresponded more closely to the X-ray findings than the "less active" cases, in which evidence of activity was found only on culture.

Bacilli Found on Smears from Attempts at Culture which Produced no Macroscopic Colonies.

Smears from 15 attempts at culture which showed no macroscopic evidence of any growth, were found to contain acid-fast and alcohol-fast bacilli varying in quantity from a few to a number per microscopic field, the finding being confirmed by both methods of staining. For the purpose of this report these findings have been classified as absence of cultures. In one or two cases the bacilli had an atypical morphology, being mainly very short and without any "beading". Generally such cultures are discarded as being "negative", especially when, as in these cases, all subcultures were also "negative" for colony growth. However, records were kept of the result of each tube of medium inoculated for each patient. It was not uncommon to find, in the cases in which examinations were made on three consecutive days, that one or more of the tubes showed this type of result, whilst the other tubes yielded colonies, and similar results were found in our cultural examinations of sputum.

It is considered that the bacilli which had a typical and "beaded" morphological appearance were possibly tubercle bacilli, which for some reason (and there could be many) had died, and this aspect is now under investigation.

It is interesting to note that the X-ray reports in these cases (15) were as follows: "active", eight; "doubtful", six; "negative", one.

Summary.

The gastric contents of 82 patients were examined. In 46 cases (56%), either acid-fast bacilli were detected in film preparations from the centrifuged deposits (confirmed by culture), or else characteristic colonies of *Mycobacterium tuberculosis* were grown on culture if acid-fast bacilli were absent from the smears of the centrifuged deposits.

Twenty-seven of these patients with active lesions were aged under thirty-five years. Sixteen of them had a normal blood sedimentation rate. Of the 16 patients in this group who were found to yield acid-fast bacilli in smears from the centrifuged deposit of the gastric contents, 12 presented X-ray evidence of activity of the tuberculous process. Of the 11 patients in this group from whose gastric contents acid-fast bacilli were obtained only on culture, only four presented X-ray evidence of activity of the tuberculous process.

Comment and Conclusion.

Webster[3] makes the following assertion:

> Experience gained during the last three years in the cultivation of 370 strains of *Mycobacterium tuberculosis* from 928 diverse samples of pathological tissues and exudates has convinced me of the validity of the claims of those workers who assert that cultural methods are at least as effective as that of guinea-pig inoculation.

However, as far as gastric contents are concerned his technique appears to be employed when no acid-fast bacilli can be demonstrated in smears and when the clinical diagnosis is more or less doubtful: "the acid-fast bacillus cultivated from the gastric mucus was required to prove its capacity to induce fatal tuberculosis in a guinea-pig". Unfortunately there are no facilities at this clinic to carry out this part of the work; but as has been mentioned above, all doubtful results have been considered negative results for the purpose of this report.

In conclusion, we can find no better summary of these findings than a statement made by Pinner[4] which we quote:

> . . . it is urgently stressed that for diagnostic and prognostic purposes no laboratory work equals the importance of careful, complete and frequently repeated bacteriological studies. The greater the limitation of technical laboratory workers, the greater the necessity for concentrating on bacteriological work and omitting auxiliary laboratory methods of limited and uncertain value.

References.

(1) V. M. Schwarting: "Inhibitive Effect of Gastric Lavage on Tubercle Bacilli", *American Journal of Clinical Pathology*, Volume XV, June, 1945, page 234.

(2) C. H. Kramer: "Effect of Human Gastric Juice on Tubercle Bacilli", *American Review of Tuberculosis*, Volume LIII, April, 1946, page 385.

(3) R. Webster: "Studies in Tuberculosis, I", THE MEDICAL JOURNAL OF AUSTRALIA, Volume I, 1941, page 661.

(4) M. Pinner: "Pulmonary Tuberculosis in the Adult", 1946, page 370.

Reports of Cases.

REITER'S SYNDROME.

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CASES presenting the triad non-specific urethritis, conjunctivitis and polyarthritis have attracted some attention in England recently. As the condition is rare and appears to be unfamiliar to Australia, the following case report is of interest.

Clinical Record.

The patient, I.E.W., a male, aged nineteen years, previously healthy, on August 6, 1947, complained of headache, malaise, vague aching pains diffused over the abdomen, and a feeling of cold. He considered that he was suffering from a mild attack of "flu" and remained at work. His symptoms subsided after about three days, and on Sunday, August 10, feeling perfectly well, he underwent considerable exertion and exposure to cold in climbing the snow-covered Mount Barrow with some friends. He felt well on the following day, but on the evening of August 12 he complained of a recurrence of headache, malaise, abdominal pains and a feeling of cold. He also complained of vertigo, of several "shivering turns", and of great difficulty in passing urine, and noted a scanty thick urethral discharge. Subsequently he felt hot and flushed, and perspired freely. The following day he went to work, still feeling very unwell; but the urinary symptoms were rapidly subsiding.

On August 14 both eyes became swollen, red and painful; there was a scanty purulent discharge which tended to stick the lids together on succeeding mornings. The pain was superficial and of moderate severity, and no photophobia or impairment of vision was noted.

On August 15 he complained of aching pain of moderate severity, together with tenderness and swelling of the left mid-tarsal joints. Later the same day both interphalangeal joints of the left third finger became similarly affected, and later still the right mid-tarsal joints to a milder degree. He was treated on this day by his parents with boracic acid baths to the eyes, a proprietary liniment was massaged into the affected joints, and some pills which (very) apparently contained methylene blue were given. A purgative was also given that night, and was followed by the passage of a single loose stool the next day. Apart from this, he had a single normal motion each day.

He had noted no hæmaturia, blood in the stools, nausea, vomiting or skin lesions. He stated that he had never suffered from any serious illness, and further that he had passed a medical examination for a student pilot's licence (civil aviation) about one month previously. He also stated that he had never been exposed to venereal infection, and there is no reason to doubt this. His occupation is clerical in an airline office, and he has never been out of Australia. The family history was not relevant, except possibly in that there was stated to be a gouty diathesis on the maternal side.

He was first examined by the writer in the afternoon of August 16. On examination, he appeared to be a well-developed youth of the stated age in no great discomfort. His face was flushed and he was perspiring freely. His temperature was 101·4° F., his pulse rate was 84 per minute, his respirations numbered 18 per minute and his blood pressure was 122 millimetres of mercury (systolic) and 80 millimetres (diastolic). Both conjunctivæ were deeply and uniformly injected and there was a scanty mucopurulent discharge. Neither cornea nor iris appeared abnormal. The nose, throat and tongue appeared healthy. The spleen, liver and lymph nodes were not palpable, and no abnormality was detected in the heart, lungs or abdomen. The genitalia appeared normal, and no skin lesions were observed. Both feet were slightly swollen and did not pit on pressure. Some tenderness and redness were present in the region of the mid-tarsal joints, and these gave rise to pain on movement. The changes were more pronounced on the left side than on the right, and similar changes in a milder degree were noted in the interphalangeal joints of the left third finger. No abnormality was detected in a brief examination of the nervous system. The patient appeared to be intelligent, frank and cooperative. The urine was a deep blue-green, acid and cloudy, and it cleared on being heated. No albumin or reducing substances were detected. Microscopic examination revealed profuse oxalate crystalluria, about three pus cells per high power field and a little epithelial debris; no organisms were observed.

Pending the results of investigations, the patient was treated at home (where adequate facilities existed) by rest in bed, unrestricted diet, free fluids, an alkaline mixture, the administration of acetylsalicylic acid when desired, and boracic acid bathing of the eyes followed by the instillation of drops of "Metaphen" (one in 2500) four times a day.

On August 17 he felt generally better, but in the afternoon he had a slight attack of shivering and feeling cold, and the right knee joint became tender, painful and swollen. On examination of this joint hydrarthrosis of moderate degree, some local heat, and redness and pain on movement were detected. All other features of the illness were subsiding; there were now no urinary symptoms, and examination of the urine gave negative results. The following day general improvement continued, but the left knee became involved to a much milder degree than the right.

The results of investigations were as follows. The erythrocyte sedimentation rate was 25 millimetres at one hour (Wintrobe's method). The hæmoglobin value was 12·3 grammes *per centum*. The erythrocytes numbered 6,000,000 per cubic millimetre and the leucocytes 7600 per cubic millimetre. Examination of a blood film revealed that the erythrocytes were normal; the leucocytes were of normal types and relative proportions; the platelets were of normal frequency. An attempt at culture of microorganisms from the blood yielded no growth after three days. Examination of a conjunctival smear revealed a few polymorphonuclear leucocytes and some cellular debris; no organisms were recognized; culture of the material yielded several colonies of *Staphylococcus albus* only. The Kline and Wassermann tests and the gonococcal complement fixation test all produced negative results.

Comment.

This case presents the classical features of Reiter's syndrome. Other features which have been reported in conjunction with the triad non-specific urethritis, polyarthritis and conjunctivitis are hæmaturia, diarrhœa with blood in the stools, episcleritis, iritis, keratitis, and cutaneous eruptions of various types including *keratodermia blenorrhagica*. Cases have been reported from Canada, United States of America, England, Scandinavia, the Bahamas, and the condition is stated to be common in Germany. Possible cases have been reported from West Africa, the Middle East and India.

The incidence falls almost entirely among young adult males. The ætiology is unknown. Some evidence has been produced by Willcox, Findlay and Henderson-Begg to incriminate certain strains of pleuropneumonia-like organisms. In this regard the paper by Beveridge, Campbell and Lind relating to these organisms and non-gonococcal urethritis is interesting.

Inclusion bodies have been described in the conjunctival and urethral discharges and scrapings in some cases of Reiter's syndrome, and a virus agent has been postulated.

The question of allergy to bacterial products has been raised (inevitably); in particular an association with bacillary dysentery has been claimed and is discounted by most authorities. Logical doubts have been entertained in cases in which the condition commenced with diarrhœa and the passage of blood in the stools; but many cases, like the case under discussion, have been reported in which there was no evidence of a dysenteric origin. Suspicion has also fallen on the gonococcus or the virus of *lymphogranuloma inguinale* "lurking in the background"; but most authorities emphasize that the condition has no causal association with any venereal disease. So far as the writer is aware, *lymphogranuloma inguinale* is unknown to Tasmania, and material for the Frei test is not available, There appear to be no reasonable grounds for doubt that the case reported here was of non-venereal origin.

The disease is self-limited, complications are rare, and resolution is usually complete. Recurrences of the various features sometimes take place, and the duration varies from several weeks to several months. Favourable results following the exhibition of gold salts have been claimed. Conflicting reports have been given with regard to the value of penicillin, sulphonamides and salicylates. It is not expected that therapeutic results of any significance will be gained in the case reported here, as the disease process was not very severe at the outset and appears to be undergoing rapid spontaneous resolution.

Jackson has pointed out the possibility that some incomplete forms of the same disease process may be generally recognized as the slightly more familiar non-specific urethritis, palindromic rheumatism and kerato-conjunctivitis of unknown ætiology. With regard to the reputed value of arseno-benzenes in the first-named condition, it is perhaps surprising that the writer has seen no reference to the use of these compounds in Reiter's disease. Much more remarkable is the fact that up to the present not a single vitamin has been the subject of exuberant claims for specific or adjuvant treatment.

Acknowledgement.

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Bibliography.

Annotation: "Reiter's Syndrome", *British Medical Journal*, April 12, 1947, page 495.

C. R. Baxter: "Reiter's Disease", *British Medical Journal*, December 7, 1946, page 858.

W. I. B. Beveridge, A. D. Campbell and P. E. Lind: "Pleuropneumonia-like Organisms in Cases of Non-Gonococcal Urethritis in Man and in Normal Female Genitalia", THE MEDICAL JOURNAL OF AUSTRALIA, February 9, 1946, page 179.

W. E. Coutts: "Reiter's Disease", *British Medical Journal*, March 8, 1947, page 309.

D. Forbes: "A Case of Reiter's Disease", *British Medical Journal*, December 7, 1946, page 859.

A. H. Harkness: "Reiter's Disease", *British Medical Journal*, January 11, 1947, page 72.

K. W. G. Heathfield: "Reiter's Disease", *British Medical Journal*, March 8, 1947, page 309.

R. N. Heron: "Reiter's Disease", *British Medical Journal*, August 24, 1946, page 275.

W. P. U. Jackson: "The Syndrome Known as Reiter's Disease", *British Medical Journal*, August 10, 1946, page 197; "Reiter's Disease", *ibidem*, September 14, 1946, page 403.

J. Kay: "Reiter's Disease", *British Medical Journal*, August 31, 1946, page 309.

G. D. Kersley: "Reiter's Disease", *British Medical Journal*, August 31, 1946, page 309.

F. Marsh: "Reiter's Disease", *British Medical Journal*, August 24, 1946, page 275.

J. Marshall: "Reiter's Syndrome", *British Medical Journal*, April 26, 1947, page 578.

G. T. Newton: "Reiter's Syndrome", *British Medical Journal*, April 26, 1947, page 578.

R. R. Willcox, G. M. Findlay and A. Henderson-Begg: "Treatment of Reiter's Syndrome by Gold Salts", *British Medical Journal*, April 12, 1947, page 483.

P. Wood: "Reiter's Disease", *British Medical Journal*, August 31, 1946, page 309.

F. Wrigley: "Reiter's Disease", *British Medical Journal*, August 10, 1946, page 199.

Reviews.

AN UP-TO-DATE VADE MECUM.

"PHYSICIAN'S HANDBOOK", first published in 1941, is now in its fourth edition.[1] It is not difficult to understand the popularity which has occasioned so many editions, for it is really a remarkable little book. The repeated editions have also made it possible to keep the subject matter up to date, an opportunity of which the compilers have taken full advantage. The purpose of the handbook, as defined in the preface, is "to summarize tersely, clearly and comprehensively diagnostic procedures and factual data which a physician must have quickly available". The range and detail of the information included are extraordinary and one would be hard put to it to find any significant omissions; yet there is little if any superfluous matter.

The book is subdivided into two parts, one dealing with laboratory diagnosis, the other with clinical procedures and facts. The section on laboratory methods, in addition to comprehensive information on laboratory tests, includes brief but informative summaries of modern physiological and bacteriological knowledge, as, for example, the accounts of the functions of the liver and kidneys, of blood coagulation and of immunity reactions.

The second part of the book contains all manner of diagnostic material and much summarized information regarding specific therapy and the general management of patients. A great deal of miscellaneous useful data is brought together for easy reference. There is a useful list of common English and Latin abbreviations used in medical practice and even the Greek alphabet finds a place. For good measure there is a small space for the owner of the book to write in the dimensions of his own hand (for measurement standards), a metric measure is printed on the inside edge of the front cover, and calendars for 1946, 1947 and 1948 are on the back cover.

The index does not pretend to be comprehensive, but is sufficient to lead the reader to the part of the book related to the information required. The compilation of the book is essentially that of a note book, there is a good deal of abbreviation and jargon, and the production is by lithographic methods—but these can hardly be even regarded as defects as they are probably essential to the task of presenting so much up-to-date information in this handy small volume.

"MEN UNDER STRESS."

To the credit balance of war must be included the publication of "Men Under Stress", by Roy R. Grinker and John P. Spiegel, of the American Army Air Force.[2] War creates large-scale situations in which personality, the effects of strain, and treatment can be surveyed as in a giant test tube experiment. In civil life the stresses are so varied and interwoven that the view is confused and accurate analysis is difficult.

It is apparent that the authors of "Men Under Stress" have sensed a great opportunity of evaluating the life history of air force personnel and of following them into combat. Owing to the similarity of each man's individual task, the close medical observation of personnel in all stages and the large resources for treatment, the book unfolds a full-scale research on remarkable material. As it is unlikely that comparable material will occur in our lifetime, there are the makings of a medical classic in this praiseworthy work. "Men Under Stress" is a sequel to the authors' military monograph entitled "War Neuroses in North Africa".

The book falls naturally into five sections. The first deals with the background and selection of the combatants. The second concerns stress, environment of combat, including motivation and morale. The next section surveys the reactions of combat and includes psychodynamics and results. It is followed by consideration of reactions after combat and includes the syndrome of "operational fatigue", psychosomatic states, aggressive and hostile reaction, psychotic-

[1] "Physician's Handbook", by John Warkentin, Ph.D., M.D., and Jack D. Lange, M.S., M.D.; Fourth Edition; 1946. Chicago: University Medical Publishers. 6¾" × 4", pp. 288, with illustrations. Price: $1.50.

[2] "Men Under Stress", by Roy R. Grinker, Lieutenant-Colonel, M.C., and John P. Spiegel, Major, M.C., Army Air Forces; 1945. Philadelphia: The Blakiston Company. 9" × 6", pp. 496. Price: $5.00.

like states, psychodynamics, and treatment including narcosynthesis. The book closes with a chapter on civilian applications.

The text includes sixty-five case histories. They are well written and worth a perusal for their literary quality alone. They are interesting commentaries on the life of an airman under conditions of war.

The authors place great reliance on the use of "Pentothal" in narcosynthesis and give details of their technique. In their view "the opening wedge is the pharmacological effect of pentothal on the diencephalon. The barbiturate drug decreases diencephalic activity to a greater extent than it damps down the activity of the cerebral cortex. This results in a corresponding decrement of emergency expressions. Since it is no longer so forcibly stimulated the cortex can re-establish its inhibitory function more easily".

The case histories illustrate the basic thoughts expressed under narcosis. "My buddy wants to fly—he's crazy, its death. To die is all right naturally, but to be sent out to die is murder. Those all-night practice missions with bombs—they don't care, we're just suckers. These officers are not worth their weight in gold. I'm scared, I'm scared of them—take them away—take them away."

Or: "I'm sick. I'm going to quit this racket, Dick—my damn stomach won't let me fly." (Almost vomits and belches.) ("Would you vomit if you didn't have to fly any more?") "Damn if I know. Somebody do something quick, even if it's wrong" (writhes around in bed). "Those g—d—bicycle Generals—there goes that fighter. I think I got him."

Convulsive therapy was not employed. It is a United States Army regulation that no man can fly who has had a convulsive seizure. Sedation for sleeplessness was employed, the vehicle of choice being a combination of a quick acting barbiturate, "Seconal", with the slower acting barbital, "Nembutal" or "Amytal".

As might have been expected, the authors find that morale of the combat unit is highly important in prophylaxis against mental disorders. It depends largely upon the personality of the leader who takes the father role. He must be not merely "technically sound, but strong in character and decisive".

In a short chapter on "General Social Implications", the authors analyse the difference between fascism and democracy. They point out that every combat force is of necessity fascist in its organization, fixing the individual in a dependent position with absolute submission to authority. It is pertinent to ask whether this mass conditioning to dependence is not a major factor in our post-war problems.

"Men Under Stress" is not too psychologically technical for the general practitioner. It will be read with interest by all.

A YEAR BOOK OF DERMATOLOGY AND SYPHILOLOGY.

A NOTABLE feature of "The 1946 Year Book of Dermatology and Syphilology" is the amount of purely editorial material included.[1] At the beginning of the book the editors, Marion B. Sulzberger and Rudolf L. Baer, present a special article of over fifty pages in length entitled "Some Advances in Dermatologic Management". This article, which is specially designed for the general practitioner, considers not only "those therapeutic measures which have been introduced, reintroduced or materially improved in recent years", but also "newly discovered or newly appreciated contraindications for, or inadequacies of, therapeutic procedures". A practical evaluation is made of the dermatological use of the sulphonamides, penicillin, streptomycin and tyrothricin. Some new drugs of the quinoline group are discussed, as well as the relative merits of recently introduced, less "messy" tar preparations, the use of fatty acids in superficial fungous infections (apparently a valuable and foolproof medicament for prophylaxis and mass treatment) and the value of podophyllin in the treatment of venereal warts. There are short discussions on antiscabietics and lousicides, on the value of BAL in the treatment of arsenical and mercurial poisoning, and on the successful use of orally administered bismuth preparations for syphilis and skin affections. A preliminary report is given on the acid *débridement* of burns. Vehicles for skin medicaments are discussed at some length (a "glamorous" prescription for the treatment of acne is given), the new "antihistaminic" agents are described, and the present value of vitamins and hormone therapy is considered. The article concludes with sections on surgery, physiotherapy and psychotherapy in relation to dermatological conditions. The authors explain that their selection of subject matter in this article was rather arbitrary, but they have covered a good deal of ground and the general practitioner in particular should find their discussion most helpful.

The remainder of the book consists of abstracts from current literature according to the usual Year Book plan, and this will probably be of most interest to the specialist. In their brief introduction to the volume the authors select, as the five outstanding practical advances reviewed, BAL, improvements in the mode of use of penicillin, the "antihistaminic" agents, the Charpy-Dowling-Thomas method of treating *lupus vulgaris* with large doses of vitamin D_2, and "the demonstration of how and why sulfonamides and penicillin are not suitable for general use in the topical therapy of skin diseases". These matters and many others are considered in the first section of the literature reviewed, that dealing with treatment and prevention. Further sections cover X-ray and other physical therapy, eczema, urticaria and allergy in general, drug eruptions, miscellaneous hæmatogenous and other dermatoses, cancers and other tumours, skin manifestations of the leuchæmias, fungous infections and other infections and infestations. A separate section is devoted to venereal disease (exclusive of gonorrhœa); it deals first with syphilis, its treatment (most of the articles are on penicillin or the intensive forms of therapy), untoward reactions to treatment, recent work on diagnostic procedures, and a number of clinical studies; further subsections are on the venereal diseases other than syphilis and gonorrhœa, and on public health aspects. An interesting section covers reports of investigative studies of skin affections and of syphilis, including material of academic rather than of directly practical interest, and the volume concludes with a miscellaneous section. The usual features and excellent production of the Year Book series are maintained in this book which can be confidently recommended to dermatologists, general practitioners and others interested in the treatment of skin diseases and syphilis.

[1] "The 1946 Year Book of Dermatology and Syphilology", edited by Marion B. Sulzberger, M.D., assistant editor, Rudolf L. Baer, M.D.; 1947. Chicago: The Year Book Publishers, Incorporated. 7" × 4¾", pp. 638, with many illustrations. Price: $3.75.

THE PSYCHOLOGY OF THE UNWANTED CHILD.

IN "The Psychology of the Unwanted Child", Dr. Agatha Bowley has made a study of the personal needs of the child whose own family has failed him.[1] Her years of experience as psychologist to the Leicester School Psychological Service and her genuine concern for the welfare of all unhappy children have made her particularly competent to do this, and this book should be compulsory reading for all social workers and those responsible for the institutional care of children. In these days when there are so many children whose security has been shattered by the effects of war, it becomes the responsibility of all who possess humanity and good citizenship to inform themselves as to the most satisfactory ways of helping these children and of making an informed public opinion vocal on the matter. Dr. Bowley's book would be an excellent introduction for anybody interested in this subject.

The author could have done a good job on behalf of these unfortunate children by merely quoting instances from her case histories which show what tragedies can occur when children are unloved and neglected. However, throughout the book the emphasis is on the constructive angle which shows what can be done to help such children to become satisfactorily adjusted to society when their needs are properly understood and they are placed in an environment in which the leaders are skilled and sympathetic.

Dr. Bowley gives an excellent general discussion of the essentials of good personality development and of the causes and effects of emotional rejection. In a study of fifty unwanted children it is shown how unhappiness and delinquency are the natural outcome of circumstances in which neither affection nor security is known to the child.

The remedies and methods of readjustment suggested describe various experimental schools and hostels which are doing good work, but, of course, they need to be multiplied many times in every country of the world.

[1] "The Psychology of the Unwanted Child", by Agatha H. Bowley, Ph.D., with a foreword by S. Clement Brown, M.A.; 1947. Edinburgh: E. and S. Livingstone, Limited. 7¼" × 4¾", pp. 124. Price: 6s.

The Medical Journal of Australia

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All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE BRITISH COUNCIL AND ITS WORK.

EVERYONE hears from time to time of the British Council; its activities are met with in so many aspects of community life that it is not to be wondered at when people with all kinds of divergent interests are heard asking: "What is the British Council, and what does it do?" One section of the work of the British Council is planned to be of direct help to those who practise medicine. In order that this section may be more widely known and used, and indeed that the whole work of the British Council may be as widely known and appreciated as it ought to be, it has appeared advisable to prepare a short account of what is being done. Those who read this account will at any rate be able to give some intelligent information to those who ask questions.

The British Council was inaugurated in 1935 by the Government of Great Britain with funds provided by parliamentary grants for the "purpose of making the life and thought of Britain more widely known abroad". There is no intention to project the British way of life; the work is intended to be "one side of an exchange". The operations of the British Council are not confined to the British Commonwealth of Nations. It has been pointed out in one of the Council's reports that the idea of exchange is the core of popular relations and this has been found to be true in the year 1945-1946, especially in regard to work carried out in Europe. It is pointed out in a summary issued by the Council that in addition to the existing formal relations between countries on political, commercial and military levels, there is need for another channel, non-political and non-economic, and this the British Council seeks to provide. In 1940 the Council was incorporated by Royal Charter. It was desired that the Council "should not in any sense be an instrument of propaganda for the Government of the day"; the conduct of its affairs was therefore placed in the hands of an executive committee which was to be representative of all branches of current thought. In June, 1946, the Government decided that the Council should continue to work under its charter for another five years and that then the position would be reviewed again. At the same time this restricted the work of the Council, for it announced that "in order to avoid overlapping between the British Council and the Government's overseas information services" the Council's scope would in future be restricted to educational and cultural work. The Council itself thinks that, though this restriction will naturally affect its work, the result will not be so pronounced as might be expected, for it is still possible to concentrate on what it regards as essential.

Of the Council's activities in the sphere of medicine, that to which most prominence is given in the report for the year ended March 31, 1946, is the publication of the *British Medical Bulletin*. This is a valuable journal and records work done in Great Britain in the medical sciences. Successive issues give prominence to some special subject. For example, the latest issue to be received comprises numbers five and six of Volume IV, 1947, and deals with chemical carcinogenesis—the nature of carcinogenic compounds, the mechanism of carcinogenesis, metabolism of carcinogenic compounds, carcinogens of biological origin, remote carcinogenic action, occupational cancer and chemotherapy of cancer. Previous numbers have dealt *inter alia* with bacteriology, neurology, injury and repair, physics in medicine, skin and its disorders, medical entomology, congenital factors in disease, the background to chemotherapy and so on. The size of a volume may be judged from the fact that the third volume contained 250 pages and included 41 original articles, 131 summaries of articles, 18 historical and biographical notes, 78 book reviews and 13 film reviews. It is interesting to note that sets of the *British Medical Bulletin* were sent to liberated European countries as soon as was practicable, and we can well imagine with what joy and avidity they were received and studied by people who had for so long been starved of scientific pabulum. Another medical activity of the Council has been the issuing of bilingual medical texts in English, Spanish and French; these are intended to be of assistance in English classes for medical men. We can imagine that they would also be useful for English medical graduates who wanted to learn enough Spanish and French to enable them to read Spanish and French journals. It is one of the functions of the British Council to "stimulate a knowledge of the English language"; there is among British doctors a need to acquire a working knowledge of certain foreign languages and some stimulation in this direction would be welcome. A "medical information service" has also been of value, especially to persons on the Continent of Europe, inquiring about specific subjects and seeking reprints and photostat copies of original articles. As a result of exchanges established with the *British Medical Bulletin* and books reviewed in its pages a library has been founded and this is used by medical scholars from overseas who are appointed by the Council. Programmes are arranged for medical visitors brought to Britain by the Council as well as for those who travel to Britain at their own expense. Programmes of post-graduate work are also arranged for foreign medical graduates who hold British Council scholarships. In addition to medicine, the science of engineering and that of agriculture have been covered in certain ways. An effort has been made to

present to foreign engineering students in Britain an adequate picture of British electrical engineering achievements; engineering advisers and consultants have also been sent abroad on different missions. In agriculture an information service has been established; visits have been made to Great Britain by groups of agriculturalists and advisory services have been carried out. It is of interest to read that an agricultural expert who visited Egypt, as a member of the British Goodwill Trade Mission, brought back with him information on present-day agricultural conditions which has proved invaluable for the work of the Council's department.

Some of the other activities of the Council in the cultural and educational spheres need merely be mentioned. They are concerned with books, drama, films, music and so on. The visit to this country of the Boyd-Neel string orchestra is fresh in the minds of all who love music, and to many Australians is the sole association with the British Council. The British Council believes that "the imaginative and skilful development of cultural relations can, through a system of national interpretation on a reciprocal basis, promote international understanding, friendship and peace". It would be foolish to suppose that cultural development would or could alter the convictions of persons whose lives are devoted to the furtherance of an exclusive political creed. A certain mellowing effect might be produced on the individual and it must be admitted that this would be worth while. Anyhow, the kind of work in which the British Council is engaged must lead people in different parts of the world to know more about one another and possibly to understand something of one another's point of view. If one knows another person and understands his point of view, one is not so likely to quarrel with him on unreasonable grounds as with a complete stranger. One aspect of this Council's activities remains to be mentioned, and that is the question of reciprocity. The sceptic may remark that mention of the British Council's work "as one side of an exchange" is made with tongue in cheek. Let us look at the aims of the Council's educational services as set out in its report. They are:

1. To encourage the study of the English language and of British life and institutions in institutes and other British centres abroad and in foreign universities and schools.
2. To provide facilities for the training of foreign teachers of English by arranging long- and short-term courses of instruction.
3. To recommend, at the request of Universities, schools and other educational institutions overseas, suitable British candidates for vacant teaching posts in English Language and Literature, in British History and Institutions and in other humanistic, scientific or technical subjects.
4. To provide facilities whereby research workers, teachers of English and post-graduate students generally may be enabled to come to this country for study.
5. To sponsor in countries overseas the examinations of trustworthy British examining bodies by the establishment and administration of examination centres.

There is no mention of the provision of facilities for students from Great Britain to travel abroad to enlarge their outlook, to gain understanding of how people in other countries live and work and play, and even to bring back with them, as did the agriculturalist who visited Egypt, information that may be used in the Old Country. The British way of life, as we know it, is good, but no one will believe that it is perfect. There should be a two-way traffic in persons, understanding, information and goodwill. This statement brings us back to the "blanket of ignorance" that was discussed in these pages a few months ago, and to the views of this journal and of the Chancellor of the University of Melbourne on the exchange of visits of students and teachers in English speaking countries. During the year 1945-1946 the total number of scholarships offered by the British Council was 405. Of these 73 were offered to the dominions and colonies. No one can deny that Britain would stand to gain if some of her students were sent abroad. The task of making the necessary arrangements should not rest entirely with Britain. If nothing else is done, some discussions between the dominions and Britain on dominion scholarships for students from Britain should be undertaken without delay.

Current Comment.

TYPHUS RESEARCH.

INVESTIGATIONS into various types of typhus were actively carried on in England during the war years. The results of much of this work have been published as Special Report Number 255 of the Medical Research Council.[1] It is a composite report, consisting of five studies on epidemic and murine typhus.

The primary aim was to find a drug effective against typhus. Two drugs, *p*-sulphonamidobenzamidine hydrochloride and the corresponding amidoxine, among over two hundred tested (these are listed in an appendix), were found to protect mice against epidemic typhus. The next step was to subject them to clinical trials. For this purpose an expedition was made to Algiers in June, 1943, and, some months later, to Naples, where the now historic epidemic had begun. The therapeutic trials were disappointing. The drugs proved ineffective in human infections under the trial conditions, and moreover were toxic. Despite this failure, it was wisely decided to publish a full account of the work as a base-line for future studies on the chemotherapy of the rickettsioses. A useful outcome of the expedition was a thorough clinical, biochemical, serological and pathological description of epidemic typhus. This forms the largest section of the report. It is based on a study of 114 cases, in 21 of which post-mortem examinations were also made. Some excellent monochrome plates illustrate the morbid histology of typhus and particularly the lesions of the kidney which followed the use of the drugs. The Weil-Felix test remained the standard laboratory method of diagnosis, although the rickettsial agglutination test had special value occasionally. Castaneda's slide agglutination test proved useful for rapid bedside diagnosis. From 17 patients *Rickettsia prowazeki* was isolated by guinea-pig inoculation.

The remaining three studies of the report are immunological. In Part III a test for neutralizing antibodies is described. Epidemic and murine rickettsial suspensions can be titrated by intranasal instillation of mice, as was first suggested by Rudd and Burnet for psittacosis. The number of focal lesions in the lungs depends on the strength of the suspension. If the suspension is mixed with anti-rickettsial serum, the number of focal lesions is reduced, and thus the power of the antiserum to neutralize rickettsiæ can be estimated. In Part IV four murine typhus vaccines prepared in different ways from yolk sac and mouse lung are compared, and it is concluded

[1] "Chemotherapeutic and Other Studies of Typhus", by M. Van den Ende, C. H. Stuart-Harris, F. Fulton and J. S. F. Niven, with C. H. Andrewes, A. M. Begg, W. J. Elford, M. H. Gleeson White, W. L. Hawley, K. C. Mills, F. Hamilton and C. C. Thomas; 1946. Medical Research Council of the Privy Council, Special Report Series Number 255. London: His Majesty's Stationery Office. 9½" × 6", pp. 266, with illustrations. Price: 12s. 6d.

that the potency in each case depends simply on the number of rickettsiæ. The most convenient and reliable method of comparing potencies was the power to protect mice against a massive intravenous dose of rickettsiæ. In Part V are recorded a series of experiments into the antigenic structure of murine and epidemic rickettsiæ. The surface antigen of either species gives rise to a heterogeneous group of antibodies; one fraction of these is specific; some can react with the surface antigen of the heterologous species. Antisera are, however, still more complex for antigens are readily degraded, either naturally or artificially, and these degraded antigens provoke still other antibodies, which are less specific. It is a fraction of the latter group which agglutinates Proteus OX19; the authors do not believe that Proteus OX19 and *Rickettsia prowazeki* have an identical minor antigen. Reference is made also to the soluble antigen released by ethyl ether from the rickettsial body.

Although no dramatic advances are recorded in the report—indeed the main aim of the work has not yet succeeded—all those interested in the rickettsioses will be grateful for the publication of the details of the investigations. They reveal the increasing range and intricacy of the techniques by which the secrets of these diseases are gradually being laid bare. They indicate incidentally that intranasal inoculation of mice is not without its dangers, as witness the fifteen laboratory infections with murine typhus. Finally, they provide an illustration of the necessity of collaboration in an important project, for twelve co-authors contribute to the report and close liaison was maintained with workers in the United States, Canada and Algiers.

CURARE IN THE TREATMENT OF TETANUS.

VARIOUS references have been made in these columns and in original articles published in this journal to the recent emergence of curare from the field of academic pharmacology to that of practical therapeutics, largely as the result of the development of newer and more refined preparations. It is natural that its possible value in the management of tetanus should be suggested. This is no new suggestion, as trials have been made in the control of tetanus by the older preparations of the drug over nearly a century; results were disappointing. John Adriani and Alton Ochsner have now reported[1] the results of treatment of a small series of patients suffering from tetanus with "Intocostrin", one of the newer curare preparations which has been found useful in other spheres. As they point out, the curare effect cannot be expected to be more than symptomatic, but in a disease with the clinical features of tetanus this, if successful, would be no mean advantage. The treatment was carried out by a physician member of the anæsthesia department who was in constant attendance throughout the therapy, and every reasonable care and precaution were taken. Only five patients were treated, but there were sufficient constant features in their respective responses to leave certain clear impressions. Muscular relaxation occurred in all cases, but the response was fleeting, lasting twenty to thirty minutes in most instances with a maximum of one hour; then the original tetanic state returned, and repetition of the original dose was required to produce further relaxation. The graded response obtained when the drug is used as an adjunct to anæsthesia was not obtained in these patients; the effect appeared rather to be abrupt in onset and, even though the curare was administered slowly in divided doses, decrease in muscle tone and actual flaccidity of muscles were almost simultaneous. Results of clinical value could not be obtained without almost complete curarization. Moreover, structures innervated by the cranial and cervical nerves responded earlier and more completely than those innervated by the lower spinal nerves; relaxation of the abdominal and back muscles, an essential for worthwhile clinical relief, was accompanied by paralysis of the pharyngeal and intercostal muscles with a resultant partial obstruction to the airway by accumulated saliva and mucus and a diminution of lung ventilation. This dangerous feature was controlled only with difficulty. One patient died one hour after administration of one single dose of curare which had been followed by respiratory and circulatory failure; recovery had apparently occurred as the effects of the drug wore off and the certain cause of the death was not determined, but Adriani and Ochsner believe that it was caused by the curare. Two of the patients eventually recovered and the final result is not recorded in the case of the other two, but in all cases the use of curare was not continued beyond a reasonable trial period.

Although Adriani and Ochsner rightly enough feel that conclusions cannot be drawn from such a small series, the results are not encouraging. The maintenance of adequate respiration is a problem, and it seems that death may follow the prolonged use of curare even in the face of adequate pulmonary ventilation. This fact is fully recognized by A. R. McIntyre, who has recently presented a useful study of curare from physiological and clinical angles,[1] but in spite of this he asserts that "the experimental use of curare in severe human tetanus is fully justified when adequate facilities for maintaining effective artificial respiration are available". He is not satisfied, however, with methods which rely on atmospheric pressure, for example, the "iron lung", but advocates some procedure employing positive pressure. It is too soon to pass judgement on the value of curare for the control of tetanic muscular spasms; further developments may make it a practical procedure or it may have to be abandoned, but, in view of the frankly terrible nature of this disease, it is to be hoped that at least something of value will come out of these investigations.

[1] *Surgery*, September, 1947.

CRIME IN QUEENSLAND.

THE report of the Commissioner of Police of Queensland for the year ended June 30, 1947, contains some interesting figures. The number of cases brought before the magistrates during the twelve months was 31,136. This represents a decrease during the period of 5·411%. The categories in which a decrease was noted included offences committed with violence against the person, motor vehicles stolen or illegally used and offences by juveniles. An increase was noted in offences committed with violence to property; there was a slight increase in sex offences and there was an increase in offences described as thefts due to carelessness on the part of owners of property. The language chosen to describe the last group makes one wonder whether the owners were apprehended and punished; it is a poor comment on the morals of Australian society. Of the total number of offences cleared up, 26·086% were committed by juveniles (persons under the age of twenty-one years). Cases brought before the Children's Court numbered 280, and this was a decrease of 121 on the previous year's figures. In juvenile crime there was an increase in the offences of house-breaking and factory-breaking and in the stealing or illegal use of motor vehicles. In spite of the increase in these offences, there was an overall decrease of 17·476% in offences committed by juveniles throughout the State. The Commissioner expresses satisfaction at this record, as well he may. He writes that he has always held that no factor or factors can operate to replace parental control in relation to juvenile delinquency. He attributes the material decrease in juvenile crime "to a great extent" to the fact that fathers of families who have been absent with the fighting forces have in many instances returned to their homes and are able to inculcate in the minds of youthful members of the family "tenets of good citizenship". While most people will think that the Commissioner may be right in his conclusion, other factors must obviously be considered. These include the relaxation of wartime stringencies, the return of many school teachers and a lessening of wartime excitement; the part they play may not be small.

[1] *Physiological Reviews*, July, 1947.

Abstracts from Medical Literature.

OPHTHALMOLOGY.

The Flap Sclerotomy in the Treatment of Glaucoma.

W. M. DE C. BOXILL (*British Journal of Ophthalmology*, February, 1947), in discussing flap sclerotomy in the treatment of glaucoma, gives full details of the operation and post-operative treatment. He recommends immediate instillation of 0·5% solution of eserine prior to bandaging the eyes as a safeguard against iris prolapse during the first twenty-four hours. Atropine sulphate 1% solution should be instilled at the first dressing and at intervals of twenty-four hours until digital massage is commenced. Massage is commenced when the conjunctival flap has healed.

Allergy to Entogenous Hormones as a Cause of Keratitis Rosacea.

B. ZONDEK, J. LANDAU AND Y. M. BROMBERG (*The British Journal of Ophthalmology*, March, 1947) suggest that *keratitis rosacea* may be due to the presence of hormonal allergy. Many other theories have been suggested and include bacterial pathogenesis, hypochlorhydria, and secretory and angiomotor neurosis of an hereditary character. Dietary indiscretion has also been suggested and more latterly riboflavin deficiency has been blamed. Many treatments tried have not been always successful or of lasting value. The authors describe fully three cases of *keratitis rosacea* associated with *rosacea faciei*, in all of which the patients showed sensitivity to testosterone. In the three cases desensitization was carried out by graduated injections of testosterone, and for consolidation of the treatment a ten milligramme pellet was implanted subcutaneously. Three other cases are referred to briefly. All patients showed definite improvement, but mild transient recurrences were noted. Testosterone gave relief only when given in low, gradually increased doses. The authors state that administration of large doses may cause a severe exacerbation.

Primary Glaucoma and the Pituitary Diencephalic System.

HERMAN ZONDEK AND GERDA WOLFSOHN (*American Journal of Ophthalmology*, May, 1947) studied 22 cases of primary glaucoma with the view that there might be a possible connexion between the ocular condition in these cases and the diencephalon or pituitary-diencephalic system. Tests of carbohydrate and water metabolism, basal metabolism, blood cholesterol level and the osseous structure of the skull were carried out. Of the 22 cases studied 16 gave various combinations of evidence which pointed to disturbances in the pituitary-diencephalic system. Obesity, menstrual troubles, disordered carbohydrate metabolism, a tendency toward water retention, deviations of the basal metabolic rate from the normal average, decalcification or atrophy of the bony skull and occasionally calcification also, congestion of the meningeal vessels, and a rise in blood cholesterol level were among the signs noted. Pituitary tumours were present in six of the sixteen cases. Although in six cases the patients were completely free of signs pointing to the pituitary-diencephalic system, the authors claim that it is impossible to ignore the findings. They state that two ætiological factors are of special importance: abnormal vascular function and hydration of *corpus vitreum* tissues. As regards the latter factor the authors state that some of their patients have had subjective relief after administration of mercurial diuretics, and they state that this may be used in cases in which acute action on the increased intra-ocular pressure is required. They suggest the term "pituitary-diencephalic" glaucoma to designate those cases of primary glaucoma in which the patients exhibit pituitary-diencephalic symptoms.

Subdural Hæmatoma.

CLIFTON D. GOVAN AND FRANK B. WALSH (*Archives of Ophthalmology*, June, 1947) briefly review the ætiology and symptomatology of subdural hæmatoma and discuss in more detail the ocular signs. Papillœdema is said to occur in about 50% of adults with intracranial subdural hæmatoma; however, in the series of cases observed by the authors, namely, 37 infants and 54 adults, the percentage was approximately 17 in both adults and infants. The papillœdema in adults is similar to that which is observed in cerebral tumour; in infants the papillœdema is almost invariably associated with subhyaloid retinal hæmorrhages. From their observations the authors believe that in a healthy infant the presence of subhyaloid hæmorrhage almost certainly indicates a subdural hæmatoma. In an adult the presence of such a hæmorrhage almost rules out subdural hæmatoma. The pupillary signs are particularly important in adults, but are of less significance in infants because in them the lesion usually is bilateral. In adults one pupil may be dilated and fixed, usually on the same side as the lesion. Infrequently the contralateral pupil is dilated. Dilatation of the pupil disappears within a few hours after evacuation of the hæmatoma. Ptosis may or may not be present on the side of the pupillary dilatation. In no case in the series observed was there a total paralysis of the third nerve. There was unilateral sixth nerve paresis in three cases and bilateral in one case. Nystagmus was present in three adults and conjugate deviation of eyes was present in two adults. Field defects were noted in a minority of patients. Finally the authors record anatomical differences in the supporting structures of the pial veins of the infant and those of the adult, and they suggest that these differences may be associated with the pathogenesis of subdural hæmorrhage.

Retinitis Pigmentosa.

DAN M. GORDON (*American Journal of Ophthalmology*, May, 1947) reviews methods of treatment of *retinitis pigmentosa* used in the past as well as the more recent treatment as outlined by Filatov. The various therapeutic measures adopted in the past have included the use of medical dilators, namely, inhalations of amyl nitrite and nitroglycerin, paracentesis, the use of miotics, decompression operations, administration of nicotinic acid, retrobulbar atropine injections and the use of acetylcholine. Extracts of the thyreoid gland, female hormone and testicular extracts have been used. It was thought that, if a permanent dilatation of retinal vessels could be accomplished, improvement of the condition might occur, and to this end section of the sympathetic nerve supply to the eyes has been carried out. The author concludes, after a review of all these treatments, that *retinitis pigmentosa* must still be classed as a hopeless disease. Filatov and Verbitska have introduced the concept of "tissue therapy" for the treatment of *retinitis pigmentosa* and other ocular diseases. They employ intramuscular injections of cod liver oil, as well as implantation under the skin of liver, skin, placenta and other tissues. Filatov's theory is that, when tissue has been removed from the body under aseptic conditions and allowed to stand for six to seven days at 2° C., certain disintegration substances are released. Filatov prepared his cod liver oil by sterilization in a boiling water bath for fifteen minutes for three successive days. This oil was poured into ampoules, and heated to 60° to 70° C. for two hours daily for three days. He started with 0·5 millilitre doses given intramuscularly and later increased the doses to one millilitre and then to two millilitres given three times weekly, with the series consisting of from 10 to 24 injections. The author recommends sterilization of the oil in ampoules with the addition of nitrogen and the use of a 1% procaine solution as a base to prevent delayed reactions. The Filatov method of implantation or injection of tissues is also discussed. Of 110 patients treated by various methods Filatov claims success in 81, but, as the author has noted, the period of follow up has been short. Working at the New York Hospital, the author is carrying out an investigation of 109 patients which he commenced in June, 1946, using a slight modification of the Filatov method. He points out that injection of cod liver oil is not a simple mode of therapy and injections are accompanied by various reactions. He gives a warning that, until such time as its merits are more fully determined, it would be singularly unfortunate if large numbers of ophthalmologists rushed into action with this therapy and attempted to evaluate it on very small numbers of patients.

Treatment of Corneal Ulcer with Blood and Blood Plasma.

ERWIN GROSSMANN (*Archives of Ophthalmology*, June, 1947) reports six cases of corneal ulceration which did not respond to orthodox treatment, but which responded rapidly to local application of whole blood or blood plasma. He recommends that whole blood should be used as it is readily obtained from the patient himself. Method of use is to instil whole blood into the eye and then firmly to bandage the eye. In the cases in his series the whole blood was instilled once daily.

Chorioideremia.

BENJAMAN ESTERMAN (*Archives of Ophthalmology*, June, 1947) draws attention to the fact that only 31 cases of a condition described as chorioideremia have been published in the literature. He adds to the literature with the report on a case occurring in a male, aged twenty-nine years. The term has been used to describe an apparent absence ophthalmoscopically of the entire chorioid except in the macular region. The condition is always bilateral, is almost invariably

confined to males and is usually associated with night blindness, with sharply contracted visual fields, but often with relatively unimpaired central vision, and in the majority of instances occurs in persons with myopia of moderate degree. The author makes no attempt to explain the ætiology, but quotes the various theories suggested by Mann, Collins and Mayou and Nettleship. The diagnosis is to be made from *retinitis pigmentosa*, gyrate atrophy, chorioidal sclerosis and massive retinal gliosis.

OTO-RHINO-LARYNGOLOGY.

Tests for Labyrinthine Function following Streptomycin Therapy.

A. GLORIG AND E. P. FOWLER, JUNIOR (*Annals of Otology, Rhinology and Laryngology*, June, 1947), state that the opportunity to study thoroughly the selective effects of streptomycin on the labyrinth presented itself to them when a programme was started to determine the efficacy of the drug in the treatment of tuberculosis. The auditory and vestibular systems of 32 patients were studied at various periods of the streptomycin therapy. In addition more than 90 patients with vestibular dysfunction were seen by the authors at various hospitals in which the substance was being used. Only 11 cases of deafness due to the drug were found and only three of these were unassociated with tuberculous or influenzal meningitis; none of these three patients had received excessive dosage. The 32 sanatorium patients under treatment for tuberculosis all received careful otic examination, including neurological, bone and air conduction audiometry, and caloric tests before therapy was begun. Daily dosages of 1·8 to 2·0 grammes, divided into three-hourly subcutaneous injections, were administered for from one to four months. Audiometer tests were repeated every two weeks. All but one of 23 patients who had had more than two months of streptomycin therapy maintained a normal audiogram. This one patient showed a 65 decibel loss for the tones 2048, 4096 and 8192. She had been treated for 121 days. She had no caloric responses before or after treatment. The ability correctly to locate sound seemed to be unimpaired in all patients tested. In contrast to the lack of auditory symptoms almost all of the patients had vestibular symptoms and signs. Daily checks were made for spontaneous or positional nystagmus, and a few days before vertigo was complained of a fine nystagmus could be made out with lateral gaze in either direction. One of the first symptoms noticed by the patient was blurred vision while reading. Spontaneous nystagmus of second or third degree did not occur in the special group of patients, but was occasionally observed in the larger group, especially in persons with tuberculous meningitis. The vertigo frequently took the form of "a feeling of continuing to turn" after the head had been turned. Usually the vertigo was not severe and might be induced only by turning the head. In some cases severe vertigo so as to induce nausea and vomiting was noted. The onset of vertigo was after 11 to 20 days in two cases, after 20 to 25 days in eleven, after 30 to 40 days in three, and after 50 to 60 days in one case. Six patients did not complain of vertigo at any time. The duration of vertigo was from five to fifty days. All but three of 23 patients who were considered to have received enough streptomycin to be adequately studied, developed loss of reaction to rotation and to caloric stimulation when the treatment was continued for more than 25 days. Caloric tests were found to be most suitable, and a method enabling minimal stimulation to be applied with accuracy was devised in order to study the loss of vestibular response with greater care with the object of finding out if it was peripheral or central in origin. Another point was to establish the time after commencement of streptomycin therapy that a significant change took place in the vestibular apparatus. The stimulus time and the total time, both hot and cold water being used, were kept by two independent observers. In the case of 25 patients thus tested a shortening of nystagmus time of at least thirty seconds was found on the twentieth to the twenty-fifth day. It is possible that a few patients had a shortened time before the twentieth day. Some ataxia and a tendency to walk on a broad base were observed in the case of all patients who lost caloric responses, especially after three or four weeks of treatment. Compensation gradually occurred, so that, after three or four months, incapacity was not noticeable if vision was not obstructed and the surface smooth. When all these patients were blindfolded or on an irregular surface, imbalance would occur in all patients, even in those who seemed to have compensated most. Walking even without a blindfold was next to impossible in the interval between the beginning of a changed caloric response and the final occurrence of a "negative" response. There is a question whether the loss of vestibular function is permanent. So far there has been no recovery of response up to four months after the first "negative" caloric response. Rotation tests were employed in a proportion of cases and revealed a total absence of the normal reactions in patients who had had recurrent heavy doses of streptomycin. Tests on a tilting table also indicated absence of vestibular response and were interpreted as indications of a peripheral location of the streptomycin effect. The types of response to galvanic stimulus also seemed to indicate a peripheral lesion. So far no convincing evidence of pathological changes has been detected in sections of labyrinths studied.

Streptomycin in Surgical Infections of the Ear.

E. J. PULASKI AND C. S. MATTHEWS (*Archives of Otolaryngology*, May, 1947) have presented the results obtained in a group of 41 patients with surgical infections of the ear and surrounding structures treated at a United States army hospital by means of streptomycin. They state that streptomycin has a potent antibacterial action on Gram-negative bacteria and on Gram-positive cocci, including those found to be penicillin resistant. The substance may not be administered orally, but must be given intramuscularly or locally or topically. Intramuscular injections in doses of 0·25 to 0·5 gramme are given every three or four hours. Intrathecal injections in doses ranging from 0·1 to 0·5 gramme are given once or twice daily. For topical use, solutions and plasma powder triturates are employed. Five patients with chronic *otitis externa*, unaffected by other agents, responded favourably to the topical administration of a solution of streptomycin (five microgrammes per millilitre). Eleven of 13 patients with chronic *otitis media* of mixed bacterial cause were benefited by local therapy. One patient infected with *Pseudomonas æruginosa* failed to improve. *Pseudomonas* and *Bacillus proteus* infections respond less than others to streptomycin therapy. One patient with mastoiditis and lateral sinus thrombosis recovered after surgical intervention and streptomycin administration. Recovery occurred in seven of eight cases of brain abscess of varied bacterial cause after surgical drainage combined with systemic and local streptomycin therapy. In the case of meningitis best results were obtained with combined systemic and intrathecal administration of the drug. The importance of adequate surgical treatment in conjunction with chemotherapy is emphasized.

An Obturator Employed in the Repair of an Obstructed Fronto-Nasal Duct.

G. B. NEW AND J. B. ERICH (*Archives of Otolaryngology*, February, 1947) state that stenosis of an artificially enlarged fronto-nasal duct often occurs after surgical drainage of the sinus. Any tract or cavity artificially prepared tends to become occluded by scar tissue unless held open by some mechanical means. After a time this tendency to contracture gradually diminishes until finally the cavity will stay open without mechanical aid. In treating strictures of the nostrils, larynx and other tubes the authors have found that an obturator must be worn for approximately six months before the danger of contraction has passed. A corresponding length of time is required before an obturator can be removed from the fronto-nasal duct without the prospect of subsequent cicatricial occlusion. The usual plan of mechanically maintaining the patency of the canal for a few days or weeks seems inadequate in the average case. Obturators of metal or of rubber are not readily tolerated for long periods of time, and frequently, acting as a sort of irritating foreign body, cause a discharge, often of foul odour. An acrylic obturator of proper contour may be worn without discomfort, and if, after several weeks, it becomes displaced, it can easily be reinserted, even by the patient himself. Being smooth and non-porous and non-irritating, it inhibits the formation of granulation tissue. The obturator is first fashioned manually in dental wax, with the aid of a lateral X-ray photograph of the patient with rubber drainage tube in place taken about one week after operation, and also from measurements made on the patient himself. The rubber drain is then removed and the wax pattern is inserted and modified if required. The rubber tube is then reinserted while the wax pattern is used for processing in one of the dental acrylic materials. The obturator should not be made hollow, since nasal secretions may cake within it. Secretions from the frontal sinus work out readily around the obturator. The obturator should be kept in position for six months to assure patency of a newly constructed fronto-nasal duct.

British Medical Association News.

SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held at the Women's Hospital, Crown Street, Sydney, on July 17, 1947, the President, DR. H. R. R. GRIEVE, in the chair.

Episiotomy.

DR. JOHN CHESTERMAN discussed episiotomy and made a plea for its more frequent use in cases in which the correct indications were present. He illustrated his remarks with slides shown through a 35-millimetre projector.

The first series of slides illustrated the muscular and fibrous tissue construction of the pelvic floor.

Dr. Chesterman then went on to explain the damage to the pelvic floor and particularly to the urogenital diaphragm produced by childbirth. He pointed out that the passage of the fœtus greatly distended the space between the anterior edges of the *levatores ani* muscles and their fibrous covering, stretching and tearing them and separating their attachments to the perineal body. At the same time the vaginal opening through the urogenital diaphragm was greatly distended, with resultant tearing or over-stretching of the deep transverse perineal muscles and the bulbo-cavernosus muscles at their meeting point in the perineal body. He said that much damage of that nature was done to the pelvic floor without any surface skin tear of the perineum, distension of the regions already described being prolonged by excessively delaying the birth of the head so as to avoid a perineal skin tear. Such prolonged distension was a common cause of a permanently lax vaginal introitus, with later prolapse of the vaginal walls, which in their turn pulled down the uterus, thus causing one variety of prolapse. Dr. Chesterman expressed the opinion that saving the perineum was a good thing, but not at the expense of the fibro-muscular pelvic floor and of prolonged pressure on the fœtal head. A properly performed episiotomy was the means of avoiding the difficulty. He pointed out that the operation facilitated and quickened the delivery of the presenting part, thus obviating prolonged stretching of the pelvic floor and prolonged pressure on the fœtal head. A clean cut was placed where the operator desired it, and that was easier to suture properly and healed better than a bruised, lacerated tear.

Dr. Chesterman listed the following indications for the use of episiotomy: (i) if the perineum seriously delayed the birth of the presenting part; (ii) if it was evident that the perineum would tear, for example, in the presence of a persistent occipito-posterior position, a face presentation and a narrow pubic arch; (iii) in most forceps deliveries among *primiparæ* (regarded by some obstetricians as an absolute indication); (iv) in breech delivery among *primigravidæ*; (v) in the delivery of premature infants; (vi) in cases in which a previous perineal plastic operation had been performed.

Dr. Chesterman then briefly outlined the technique of the operation, illustrating his description with slides. He said that the incision should be made with blunt-pointed scissors during a uterine contraction and should start in the mid-line posteriorly. The incision could be continued as a median incision through the perineal body as far as the anterior border of the external *sphincter ani* muscle. If that did not appear to give sufficient room the incision should then be turned laterally (like a J). Dr. Chesterman said that he preferred the alternative incision, that was to say, the medio-lateral episiotomy, the incision starting in the mid-line and extending laterally towards a point midway between the anus and the ischial tuberosity. That incision protected the rectum from involvement should an extension of the cut occur. It was important to make an incision large enough to avoid a perineal tear elsewhere. By starting the episiotomy in the mid-line as described, the highly vascular areas were avoided and Bartholin's duct was not cut.

The method of repairing the incision was then briefly outlined. It should be commenced by placing Allis forceps on each margin of the incision at the muco-cutaneous junction between the vagina and perineal skin. The first suture line should commence at the apex of the cut in the vagina, and, with plain catgut (number 2 gauge), a continuous suture should be carried down to the junction of the vaginal mucosa and skin, the floor of the posterior vaginal wall being thus reformed. Should the episiotomy have been a wide one, it was an advantage next to insert two or three interrupted buried plain catgut sutures within the cavity of the wound, care being taken to bring together any cut ends of muscle fibres that tended to retract and to pull back the side walls of the incision. The skin incision was then brought together by the use of non-absorptive sutures (for example, nylon thread). The sutures should be placed deeply so as to go through the base of the incision; they should be close enough to give correct coaptation of the wound, but should not be tied too tightly.

Dr. Chesterman said that he had found that method most satisfactory and the resultant perineum often as firm as it had been previously, and certainly firmer than many perinea in which no tear had occurred during childbirth.

Myomectomy.

DR. R. B. C. STEVENSON discussed four recent cases of myomectomy. Photographs of drawings of the various stages of the operations were projected onto the screen by a 35 millimetre projector.

Dr. Stevenson stated that one of the chief dangers of myomectomy was hæmorrhage, and demonstrated that with the use of Bonney's myomectomy clamp the amount of blood lost during even very extensive myomectomy could be negligible.

Another great danger was intestinal obstruction by post-operative adhesions to the uterine scars. Dr. Stevenson showed that, by the use of three manœuvres, all scars on the uterus could be covered up.

The first slide showed the method of applying Bonney's myomectomy clamp in the ordinary way. The curve of the instrument was directed towards the *symphysis pubis*, and the blades, ensheathed in rubber, surrounded the uterus at the junction of the cervix and body. The round ligaments were included in the grip of the blades in order to stop the instrument slipping down the cervix. The infundibulo-pelvic fascia was clamped on each side by means of a pair of sponge forceps whose blades were ensheathed in rubber tubing.

The second slide showed the method of applying the clamp in the reversed position, with the curve of the instrument directed towards the umbilicus. That was necessitated by the disposition of the fibroid growths in some cases.

Sometimes a small cervical fibroid tumour prevented the application of the clamp. In those cases it was necessary to divide the peritoneum over the bladder to enucleate the tumour and then to apply the clamp. Slides three and four showed those steps.

The fifth slide gave the case history of a female patient who was thirty-two years of age. She had sought medical advice because of sterility of nearly three years' standing, accompanied by increasing menorrhagia. She had a large cellular fibromyoma which was antero-fundal in position. This tumour was enucleated through an anterior, mid-line incision in the uterus as shown in slide number six. The cavity of the uterus was then opened, as it always should be, to make sure that there were no submucous fibroid tumours or polypi which could not be palpated. The incision in the uterus was then closed in layers as shown in slide number seven. Low ventro-suspension was then performed as a means of covering the scar in the uterus.

Slide number eight gave the case history of another female patient, aged thirty-three years. She had had a pregnancy six months previously, which had ended in premature labour at the end of twenty-eight weeks, the child surviving for six days. The patient had been advised to have a large fibroid tumour removed before attempting another pregnancy.

At operation she was found to have one large anterior fibroid growth and four seedlings. The large tumour was removed through an anterior, mid-line incision in the uterus, as demonstrated in the previous case. The seedlings were also removed. The anterior incision in the uterus was entirely covered over by advancing the bladder peritoneum well up on the fundus of the uterus, as shown in slide number nine. Crossen's round ligament suspension operation was then performed to cure the patient's retroversion.

Slide number ten gave the case history of a female patient, aged thirty years. She had had one child four years previously. She complained of menorrhagia, leucorrhœa and exhaustion. Her menstrual periods were lasting seven days with heavy loss, whereas formerly they had lasted five days with only normal loss. At operation she was found to have a posterior fibroid tumour three inches in diameter. The tumour was removed by way of a transverse incision on the posterior surface of the uterus, half an inch below the Fallopian tubes, as shown in slide number eleven.

The next slide, number twelve, showed the fibroid tumour being enucleated. At that stage of the operation there was

left a large posterior flap, which was too big for the purpose for which it was designed, namely, to swing over the fundus of the uterus, and to be attached to the anterior surface, low down near the bladder peritoneum. It was therefore necessary to trim away some of the hood as shown in slide number thirteen. The deep spaces under the hood were then sutured as shown in slide number fourteen and the hood was turned over the fundus, care being taken to insert a suture on the anterior surface of the uterus, just below the origin of the tube on each side, in order to prevent the flap from pressing on the Fallopian tubes. The hood was finally sutured to the anterior wall of the uterus, low down near the bladder peritoneum, thus completely covering up the scar in the uterus, as shown in slide number fifteen.

The next slide, number sixteen, gave the case history of a female patient, aged thirty-five years. She had complained of sterility for eight years, menorrhagia and dysmenorrhœa. At operation she was found to have fourteen fibroid tumours varying in size from a tennis ball to a marble; the majority were large ones. All these tumours were enucleated by combining the posterior, transverse incision as shown in the previous case, with a mid-line, anterior incision as shown in the first two cases. The two incisions were shown in another slide. All the tumours were enucleated, the spaces were obliterated, and the cavity of the uterus was opened to see if any submucous fibroid growths were present. The incisions were then closed in layers, and after the posterior hood had been trimmed it was turned forward over the fundus, as in the previous case; thus all incisions in the uterus were completely covered.

In all cases, the post-operative examination of the patient, conducted six to seven weeks later, revealed a normal-sized, anterior, mobile uterus.

Dr. Stevenson also exhibited a very unusual type of dermoid cyst removed from a female patient, aged thirty-six years, who had recently been discharged from the army after service in the Middle East. Her only complaint had been increasing size of her abdomen.

The cyst weighed seven pounds, and when opened it looked exactly like a large white bag filled with hundreds of white marbles, nearly all of the same size. Each "marble" was about half an inch in diameter, was perfectly round and composed of sebaceous material, and had a single short hair protruding from it.

Dicephalous Fused Twins.

DR. H. A. MCCREDIE presented a report of a case of dicephalous fused twins, as well as the specimen and some X-ray photographs taken before and after delivery. He said that a female patient, a *primipara*, aged twenty-five years, attended the ante-natal department on August 28, 1946, being then ten weeks pregnant. Her last menstrual period was on June 27, 1946, making her expected date of confinement April 10, 1947. Her health was good and the pregnancy was uneventful. At the end of January, when she was thirty-two weeks pregnant, a twin pregnancy was suspected and an X-ray examination was made. Dr. Marsh reported as follows: "Twin pregnancy, fusion at pelvis cannot be excluded. Request re-ray in several positions." After a further X-ray examination the report was as follows: "Position unchanged. Fusion is almost certain." The report on a later X-ray picture was as follows: "Definite fusion of sacra. Two legs and four arms are present."

The patient was admitted to hospital on February 22, 1947, being thirty-four weeks pregnant. Both fœtal heads were in the lower pole. On March 6, 1947, she was submitted to a medical induction of labour. Two days later the cervix was dilated with Hegar's dilators up to the largest size and the membranes were stripped off the cervix digitally. This was followed by a medical induction. In spite of this, labour did not ensue. On March 10, 13 and 20 three more medical inductions were given, making five in all.

On April 2, 1947, the patient had a few uterine contractions and one fœtal head was fully engaged in the pelvic brim. On the following day she had occasional pains and slept for three hours during the night.

During the morning of April 4, 1947, she was having pains every five minutes. At 10.5 a.m. the membranes ruptured and fifteen ounces of meconium-stained *liquor amnii* came away. At 11 a.m. vaginal examination revealed full dilatation of the cervical os with the fœtal head just touching the perineum. At midday, with ether anæsthesia, forceps were applied. As the head stretched the perineum a generous episiotomy was performed with a view to facilitating subsequent manipulation. The head was delivered to the chin quite easily, but further progress was impossible. An arm belonging to the first head was then brought down and used for traction, but the second arm could not be reached because accessibility was blocked by the fœtal head. Accordingly the head was decapitated and the second arm brought down. To lessen the bulk across the shoulders it was decided to amputate one of the second pair of arms and to take off a piece of clavicle if possible. Available space to do this was decreased by the presence of one extended leg, so this, too, was amputated. It was now found possible to apply the decapitation hook to the second neck and the second head was decapitated. The monster could now be delivered by traction on the arms. The remaining head was delivered by forceps. After an adequate interval the placenta was removed manually, an examination being made at the same time for evidence of trauma. Also with this object in view, a catheter was passed and the urine found to be blood-stained. "Pitocin" and ergometrine and a hot intrauterine douche were given and a transfusion was commenced of one litre of serum.

The episiotomy wound was sutured and, when the anæsthesia wore off, morphine (one-quarter of a grain) was given and repeated in four hours. A catheter was left in the bladder for twenty-four hours, by which time the urine was quite clear. The patient made a good recovery and was discharged on the fifteenth day.

The weight of the monstrosity was ten pounds five ounces. There was a single umbilical cord and placenta. There was an extensive *ectopia vesicæ*.

In conclusion Dr. McCredie said that diagnosis could be made in the ante-natal period by radiography. Induction of labour was the first line of treatment; the ideal was to deliver the monstrosity while it was still small. The membranes should not be ruptured unless it was certain that Cæsarean section would not be required. If the monster was of some size a trial labour could be used to decide between Cæsarean section and embryotomy.

Ovarian Pregnancy.

Dr. McCredie then presented a report of a case of ovarian pregnancy and exhibited a specimen. He said that the patient had first attended the out-patient department on December 11, 1945, complaining of ten weeks' amenorrhœa and lower abdominal pain. She was a *multipara*, aged twenty-nine years. General examination revealed no abnormality; her blood pressure was 120 millimetres of mercury (systolic) and 80 millimetres (diastolic). She had one child, aged seven years, and had had a miscarriage six years previously. It was her third pregnancy. On vaginal examination a softened cervix was found which was pushed against the *symphysis pubis* by a round soft mass which filled the posterior fornix. The mass was taken to be a retroverted gravid uterus and an attempt was made to replace it. The attempt was unsuccessful and it was arranged to admit her to hospital in a few days for its replacement under general anæsthesia. She did not present herself for admission and sight was lost of her till January, when she again attended the out-patient department complaining of lower abdominal pain and blood-stained vaginal discharge. The mass in the pelvis was much larger and cystic and seemed well incarcerated. It was thought that she was threatening to miscarry and she was admitted to hospital. Her symptoms subsided with rest and sedation and a last attempt at raising the mass out of the posterior fornix was made by the use of a large round spring pessary. That attempt was unsuccessful and, as her pain and bleeding had stopped, she was discharged to attend the ante-natal department.

On March 11, 1947, she was admitted complaining of vague abdominal pain. There was an abdominal tumour the size of a twenty-six weeks pregnancy and the tumour was rather tense and tender. Her temperature was 98·4° F., and her pulse was 100 per minute. Vaginal examination disclosed that the cervix was far up behind the *symphysis pubis* and that the internal cervical os was closed.

On the next day the pain returned. The findings on vaginal examination were unaltered. During the afternoon the pain became more severe and the patient became restless and apprehensive. The pulse rate rose to 104 per minute and her general condition appeared to be deteriorating a little. A consultation was held with Dr. R. M. Bowman and it was decided to perform an abdominal section.

In the operating theatre the patient's bladder was catheterized and a vaginal examination made. The cervix was visualized by a speculum, but only with the utmost difficulty, because it was pushed so far up behind the *symphysis pubis*. It was closed and smaller than anticipated.

When the abdomen was opened a soft uterus, slightly enlarged (the size of an eight weeks' pregnancy), was found with two normal Fallopian tubes also slightly enlarged. There was a large cystic mass arising up out of the pelvis and reaching up to the umbilicus. The end of the left

Fallopian tube, though close to the tumour, was not attached to it. There was a small thinned-out area on the front of the mass with a little blood clot attached to it. It was evident that the "spurious pains" of the previous two days had been occasioned by the stretching and bleeding of this area. An incision was made through the thinned out area and enlarged with scissors. A living female infant was delivered. She weighed two pounds two ounces and lived for one hour. The placenta and membranes were removed and the redundant portion of the ovarian sac was cut away, enough being left to sew together and secure hæmostasis. The abdominal wall was closed. The patient had some pyrexia and soft distension for two days, but thereafter made a good recovery and was discharged on April 7, 1947.

Dr. McCredie, in reviewing the literature on ovarian pregnancies, stated that, since Kaner's case was described in 1899, quite a number of well authenticated cases had been reported; up to 1938 the number was 85. In the majority of cases rupture occurred at an early date and only a few were reported that had progressed further. Banks and McCann and Monge, however, had described ovarian pregnancies which nearly reached full term, and Schorsch has reported a full-term living child delivered from an ovarian pregnancy.

Utero-Tubal Insufflation.

DR. F. BELLINGHAM presented a series of 200 cases in which he compared the results of kymographic utero-tubal insufflation with those of intrauterine injections of lipiodol and other iodized oils. The diagnostic safety and diagnostic reliability of the two methods were compared.

As to the diagnostic safety, it was agreed that utero-tubal insufflation with carbon dioxide gas was the safer method, especially when repeated therapeutic insufflations were to be performed. In discussing the relative accuracy of the two methods, Dr. Bellingham pointed out that utero-tubal insufflation probably showed tubal function, as distinct from tubal anatomy, better than the lipiodol X-ray examination, and from the kymographic tracings peristaltic waves of various types and characters could be distinguished. A series of kymographic tracings were shown to illustrate the above points.

Dr. Bellingham then went on to say that of the 200 cases presented, in which both methods were used, in only one case did the patient, who was shown by kymographic tracings to have possible tubal patency, appear to have occluded tubes when the lipiodol X-ray films were examined. On the other hand, in over 10% of the cases, in which the kymographic tracings showed occluded tubes, the patients were shown by subsequent lipiodol X-ray examinations to have patent tubes.

Dr. Bellingham concluded by saying that a kymographic tracing which showed tubal patency and tubal peristalsic waves could be relied upon as an indication of tubal patency, whereas a kymographic tracing which showed occluded tubes could not be relied upon. In the latter case a subsequent lipiodol X-ray photograph was essential before a final diagnosis of occluded tubes could be made.

Blocked Fallopian Tubes.

DR. ALAN GRANT discussed the treatment of blocked Fallopian tubes by pressure injections of gas and iodized oil in a series of cases at the sterility clinic of the Women's Hospital, Crown Street. He commenced by reviewing the results of surgical treatment of blocked tubes. The largest group of cases published was the collected series of Greenhill, consisting of 818 plastic operations on the tubes. Fifty-four pregnancies took place, an incidence of 6·6% or one pregnancy for every fifteen operations. Complications occurred in many of the pregnancies, and the ultimate successful result was one baby for every 22·5 operations. Dr. Grant stated that, according to those statistics, his results (one baby for every twenty patients suffering from occlusion of the tubes) must appear as good or better. Solomons had recorded that he had performed 366 plastic operations and thirty of the subjects had become pregnant, about one pregnancy for every twelve operations.

The usual overall chance of a successful outcome in a large series was thus somewhere between 5% and 10%, and nearer the former figure than the latter, and that figure became the yardstick against which other means of treating blocked tubes had to be measured. At the same time it was necessary to bear in mind the probability that patients submitted to those plastic operations had been carefully chosen, so that the results did not represent what total success the authors had had among all of the patients who consulted them because of tubal occlusion.

Dr. Grant then described the technique employed in his investigation and the conditions under which his experimental investigations were carried out. He explained that all patients had suffered from sterility for over one year without having used any contraceptives; all patients had blockage of both tubes or of their one remaining tube; no choice of cases was made other than those to be mentioned later, though he had found since that his results would have been much better if he had excluded patients exhibiting a cornual obstruction; occlusion of the tubes was the major sterility factor present in the married couple, but not the only one; the standard adopted for a criterion in making the diagnosis was that the tubes should be impermeable to gas after several attempts at one sitting and also that they were proved impermeable to oil at a separate and subsequent test; patients with an adnexal mass or subacute sepsis were excluded.

In discussing the technique employed, Dr. Grant stressed that it was essential to use a pressure of over 250 millimetres of mercury for insufflating blocked tubes with gas or for injecting oil into them, in order to obtain the results quoted in the discussion. It was usually recommended that the pressure should not exceed 200 millimetres of mercury for testing the patency of the tubes as an ordinary diagnostic measure. He said that on about 15% of occasions the tubes had been proved to be blocked according to the Rubins test, but were subsequently open when iodized oil was used; the error of the Rubins test was therefore 15%.

Dr. Grant's results from non-surgical treatment of blocked tubes to date were as follows: total number of patients who had completed treatment, 115; total number of patients with patent tubes, 39; total number of patients pregnant, 23 (including two ectopic pregnancies); pregnancy success rate, 20%.

In conclusion, Dr. Grant said that his work was made possible by a grant from the National Health and Medical Research Council and that he had received assistance from some members of the resident medical staff of the Women's Hospital, Crown Street.

Prolapse of the Uterus.

DR. S. D. MEARES discussed both the obstetrical and gynæcological aspects of prolapse of the uterus, setting out the method of managing the labour so as to minimize the strain on the pelvic floor, which was the chief ætiological factor in prolapse. In outlining the differential diagnosis of prolapse, Dr. Meares showed a photograph of a large cyst of the posterior vaginal wall simulating a rectocele. Stating that prolapse of the uterus at term was quite rare, Dr. Meares showed a photograph of a patient at term with the cervix protruding by two and a half inches from the vulva. He said that the patient's labour had been uneventful, though at times it was said that in such cases incision of the cervix was necessary as dilatation was poor.

Pathological Exhibit.

Dr. Meares also exhibited a specimen and microscopic section of a fibrocystadenoma of the ovary showing surface fibromata with invaginations of germinal epithelium, serous cysts and psammoma bodies.

A microscopic section showing attachment of the membranes to the fœtal scalp was also shown. The mother had had a *placenta prævia* and the fœtus was an anencephalic monster.

Anuria Associated with Delivery.

DR. MALCOLM DRUMMOND demonstrated a case of anuria following delivery. The patient was a woman of twenty-seven years having her third child. She was admitted at the twenty-fourth week in labour and bleeding *per vaginam*. Albumin was present in a catheter specimen of urine. With the hæmorrhage her condition had deteriorated rapidly and urgent blood transfusion (Rh-positive blood) was given without any reaction. The labour was completed in a few hours. The patient's blood was found to be Rh-negative and a considerable search was necessary to find completely compatible blood subsequently.

Dr. Drummond said that oliguria had developed rapidly following the delivery. The possible factors producing it were the incompatible blood transfusion and the toxæmia with the accidental hæmorrhage. The urinary output was two ounces on the second day and one ounce on the third day. Small amounts were passed up to the fifth day. On the seventh day the patient began to vomit, was drowsy and hiccupped. No urine was passed. The blood urea level had risen to 200 milligrammes *per centum*.

The following conservative treatment had been instituted. From the first day alkalis and copious fluids were given by mouth, on the third day 500 millilitres of normal saline solution with 5% dextrose intravenously, on the fifth day blood transfusion, 500 millilitres, on the sixth day 250

millilitres of 25% solution of dextrose intravenously, and on the seventh day one litre of 25% solution of glucose intravenously. There was no response to the intravenous therapy, and as a final resort, on the seventh day, direct nervous stimulation of the kidney had been considered. The methods under consideration were ureteric catheterization, decapsulation of the kidney and splanchnic block of the kidneys. It was decided to decapsulate the left kidney. The operation was performed by Dr. A. H. Gee with "open ether" anæsthesia and was well tolerated by the patient. The kidney began to secrete urine at the end of the second day, the amount rising to 180 ounces on the seventh day after operation. The blood urea level remained over 100 milligrammes *per centum* for two weeks after the operation. The patient finally made a complete recovery.

Dr. Drummond went on to say that at the operation the capsule of the kidney had been stripped readily and was not under tension. The kidney itself was of a light brownish colour and moderately enlarged. He commented that recent publications had focused attention on the mechanism of the anuria. It was suggested that the anuria was related to a change of circulation in the cortex. The cortex, being rendered bloodless, became a light brown colour. The nerve stimulation by decapsulation released that mechanism and glomerular filtration and concentration of the urine began again.

In conclusion, Dr. Drummond said that, although many other factors were involved and only one case had been presented, decapsulation of the kidney was a method of treatment worthy of further consideration in the treatment of anuria associated with accidental hæmorrhage, abortion or incompatible blood transfusion.

Referred Pain in Certain Cervical Conditions.

DR. K. A. MCGARRITY surveyed the results of treatment and observations of referred pain in sixty cases of cervical erosion and cervicitis associated with symptoms of vaginal discharge, pelvic pain, dyspareunia, bladder upsets and menstrual upsets.

Dr. McGarrity pointed out that, once contracted, cervicitis was difficult to cure, owing to the complexities of the cervical racemose glands and the tough structure of the fibro-muscular tissue in which they were situated.

The technique of treatment of cervicitis with the zinc pencil was outlined briefly. The results of treatment by its use in sixty cases of cervicitis and erosion were then reviewed, and the cases were divided into two groups, each of thirty. The first group had been observed over a period of six to twenty-four months after treatment, while the second group consisted of patients treated recently whose history was recorded because of excitatory pain symptoms produced by treatment.

Dr. McGarrity said that in the first group the chief symptom had been vaginal discharge, associated with cervical erosion or lacerated cervix and cervicitis; the treatment effected a cure in 21 cases, relief in six cases and no relief in three cases. Of those 30 patients 24 had associated symptoms of abdominal pain. This was in the right iliac fossa in 15 cases, treatment effecting a cure in 12 cases and relief in three; in the left iliac fossa in four cases with cure in two cases and no relief in two; in both iliac fossæ in three cases with relief in one case and no relief in two; in the infraumbilical region in two cases with cure in one case and relief in one. Of other associated symptoms, sacral backache occurred twice, being cured by treatment in one case and unrelieved in the other; cure was effected in two cases of dysmenorrhœa and in one each of dyspareunia and frequency of micturition.

In the second group a study had been made of the areas of excitatory pain elicited by treatment. All thirty patients had cervical erosion or chronic cervicitis with vaginal discharge; all experienced pain midway between the *symphysis pubis* and umbilicus, ten in the right iliac fossa and eight in the left iliac fossa; three had sacral backache and one urinary symptoms.

Dr. McGarrity stressed the fact that, when a normal cervix was examined *per vaginam* and moved by the examining finger in all directions, no pain was elicited, whereas in the presence of cervical pathology it was noted that mobility was restricted and any attempt to displace the cervix tended to reproduce the pelvic pain complained of by the patient. It was also noted that application of the zinc pencil reproduced the symptoms complained of and usually in sequence; first in the suprapubic region, then in the right or left iliac fossa, and finally in the sacral region. Those symptoms appeared within two or three minutes of application of the zinc pencil, and passed off after one hour. The most usual pain distribution was found to be below a line drawn between the two anterior iliac spines and in the sacral area. Those areas corresponded with the dermatomes applying to the eleventh and twelfth thoracic and third and fourth sacral segments.

Dr. McGarrity then analysed the pain arising from pathological conditions of the cervix and pointed out that the suprapubic pain was deep, not well localized, and without tenderness or hyperæsthesia of the skin, and so was typical of the true visceral pain of Ross. The iliac and sacral pain was well localized and was accompanied by tenderness over the areas involved and usually by hyperæsthesia, which was typical of the referred visceral pain of Mackenzie. Dr. McGarrity quoted Mackenzie as stating in his conception of referred pain that afferent impulses arising in a viscus, though themselves incapable of arousing any sensation, would, upon entering the canal, set up an "irritable focus", with the result that cells accustomed to receive impulses from corresponding somatic areas were excited. The impulses arising in those cells then travelled along the usual paths to the higher perceptive centre (thalamus) which projected or referred the impulses to the somatic area. Mackenzie called those reactions viscero-sensory reflexes. Tenderness to touch, pressure or light pinching of the skin (hyperæsthesia) was ascribed to those impulses, which ordinarily would be below the threshold for pain, arriving in the segment rendered hyperexcitable as a result of impulses received from a diseased organ. Head supported that conception of referred pain and mapped out the segmental distribution of the cutaneous nerves responsible for hyperæsthesia in diseased states. Head stated that the segmental areas for the reference of pain from the uterine body were the tenth, eleventh and twelfth thoracic and the first lumbar dermatomes, and those for the cervix were the eleventh and twelfth thoracic and the first four sacral dermatomes. Those areas were shown to correspond with areas affected in the cases surveyed.

Dr. McGarrity then described and demonstrated the equipment required for and technique of cauterization of the cervix with the zinc pencil. The patient was placed in the left lateral or dorsal position and a speculum introduced into the vagina and the cervix exposed. The area was cleaned by swabbing and the anterior lip of the cervix was picked up. Each of the four sizes of pencil was soaked in a saturated solution of zinc chloride for ten minutes. According to the size of the cervical canal, a pencil of suitable diameter was taken in the forceps and passed into the cervix, which was steadied by the volsellum, until the proximal end of the pencil was flush with the external os or even just beyond it. Dr. McGarrity explained that the pencil should fit accurately into the cervical canal, and therefore if the size chosen passed too easily it should be removed and a larger size inserted. The most suitable size was number 3 (one and one-eighth inch by one-quarter of an inch) and this was used in 70% or 80% of cases. The pencil should be pushed in hard enough to ensure that it would remain in position. A strip of gauze was moisened in 5% sodium bicarbonate solution and was then packed around the cervix and loosely packed into the vagina, so as to ensure the position of the pencil and to neutralize any excess of zinc chloride that might have escaped into the vagina. The instruments were removed and the patient lay quietly for a period varying from one to three hours. Number 4 pencil remained for one to two hours; number 3 pencil for three hours; number 2 pencil for four hours. At the end of that time the pack was removed and the pencil was withdrawn by traction on the wire attached to its base. No further treatment was necessary.

Dr. McGarrity stated that it had been found that a number 2 pencil absorbed 2·78 grains of zinc chloride, and of this 2·13 grains (78%) were absorbed by the cervical tissue; a number 3 pencil absorbed 4·29 grains and the cervical tissue 3·39 grains (79%); a number 4 pencil absorbed 6·6 grains and the cervical tissue 5·23 grains (79%). He referred those interested in further details to an article in the *British Medical Journal* of January 16, 1947.

Medical Societies.

RESIDENT MEDICAL OFFICERS' SOCIETY, ALFRED HOSPITAL, MELBOURNE.

THE Resident Medical Officers' Society of the Alfred Hospital, Melbourne, has arranged to hold clinical meetings on the first and third Wednesdays of each month at 12.15 p.m. in the fifth floor lecture hall. Each meeting will terminate promptly at 1 p.m., and a buffet luncheon will be served in the resident medical officers' dining room. All visitors are

invited to attend. The subject for November 19, 1947, is "Hypertension" and the speakers will be Dr. H. C. Trumble, Dr. M. C. Davis, Dr. Read (Department of Physiology, University of Melbourne), Dr. E. Clarke and Dr. W. W. S. Johnson. The secretary of the society is Dr. Bryan Hudson.

Correspondence.

ELECTION OF THE NEW SOUTH WALES BRANCH COUNCIL: THE PLEBISCITE.

SIR: I wish to draw your attention to certain aspects of the arguments submitted with the plebiscite paper for and against the proposals therein and presumably purporting to set out fairly the facts.

1. The Council itself is not neutral in this matter; it is an advocate for one method, yet submits the arguments for and against. It provides 31 lines of argument altogether, of which eight are granted in favour of the method which Council dislikes; and these eight lines are not good as well as not enough.

2. Proposition 2 (*a*) was supported by an overwhelming majority of delegates to the meeting of May 9, specially called to consider it.

3. If the Council had wished for views other than those of the local associations and special groups it might also have submitted to the voters as 2 (*c*) the original suggestion for reform in electing Council, namely that the whole Council be elected on a representative basis. Personally, I regard 2 (*a*) as a regrettable compromise and would not be surprised if 2 (*c*), properly put to the profession, were carried by a large majority.

I wish now to criticize the arguments of Council and to fill in certain gaps in the arguments for the plan of local associations and special groups.

> The purpose of the method of election recommended by the committee is to ensure majority representation on Council to local associations and special groups and women and public medical officer members, who would collectively hold sixteen positions as against ten held by those elected by the general body.

That is not well put and suggests schism. The purpose . . . is to ensure proportional representation of all interests, to which it is thought that stability is given by retaining a part of the present method.

> It would necessitate every member belonging to either a special group or local association if he were not to be partly disfranchised.

Not quite correct. It necessitates only an arrangement of voting electorates (which might be founded on the above). Active membership of special groups and local associations is not required.

> It would substantially increase the expenditure of the association and therefore necessitate an increase in the annual subscription.

I suggest we are entitled to a little more detail. For example—is part of that statement founded on the argument, many times countered, that distant country areas could not be directly represented without great cost? Whereas the position is that no area need choose its representative unless so desired from those living locally, but could be a former practitioner of the district now resident in Sydney or he could be any distinguished member who would accept an invitation to be the representative on Council. Further on the question of finance, I suggest that Council might let us know what they have found on this point from the British Medical Association in England which has a type of proportional representation. (See below.)

With regard to "the women members and public medical officer members who have frequently failed to secure representation on Council as at present constituted because of their limited numbers" may we have these numbers (and the total number of members for the State) so as to judge for ourselves what would be "reasonably representative"?

The argument that method 2 (*a*) "might tend to divide the members into sections at a time when unity is vital" represents an opinion honestly held by some. It should be equally clear that the desire for unity is not confined to those who are satisfied with things as they are: advocates of 2 (*a*) consider it would greatly unify and strengthen the profession by securing an increased interest of all members and councillors.

Now some further points in favour of the scheme of local associations and special groups.

It is more democratic to have all interests represented as nearly as possible according to their numbers.

Such a method would give direct representation (without any necessity for the objectionable practice of "running a ticket") to interests never before represented as such—co-option excluded, for example, women, public health medical officers, specialist groupings, and would allow for ready extension—as I personally advocate now—to include other groups, for example, the services, resident medical officers. It is to be noted that the alternative of Council requires every member to vote for the representatives of every community of interests, for example, we in the city here may have to decide which of the two country members best could represent his district, and general practitioners will decide the representative of public medical services.

Precedent. (*a*) Parliament. Doctors, being also simple citizens, may ask themselves on which house they consider themselves more democratically represented, the Senate or the House of Reprsentatives. (*b*) The British Medical Association in England. The Parent Body recognizes the principle of proportional representation and its constitution has been acclaimed in its own journal as a model of democracy. Note the Supplement of the *British Medical Journal* of August 30, 1947, which gives the constitution of its Council as follows:

Ex officio	6
Elected by Branches in the United Kingdom ..	20
Elected by Branches not in the United Kingdom	8
Elected by grouped representatives	12
Elected by representative body	8
Elected by public health service members ..	2
Elected by women members	1
Elected by service representatives	3
	60

This letter is perhaps a little late. It was written as soon as I received my plebiscite paper. It is hoped it may be in time to render some voters more cognizant of the position, but I would really suggest that the plebiscite papers should be recalled until members shall have discussed this new proposal of Council amongst themselves and at their Branch or group meetings, to which as far as I know it has never been submitted.

Yours, etc.,

C. C. McKELLAR.

143, Macquarie Street,
Sydney,
October 26, 1947.

SIR: 1. The Council of the New South Wales Branch appointed a committee to consider the problem of amending the constitution of Council.

2. The Council admits that a case has been made out for some change in the constitution.

3. The committee appointed by the Council gave a great deal of thought to the problem and their subsequent proposals have been freely debated by the various local associations, special groups *et cetera*. Finally their proposals were adopted by a large majority of representatives of local associations and special groups.

4. The circular from the Council does not do justice to the various advantages claimed for the proposed amendments.

5. The Council's alternative proposals have not been before the local associations or special groups for their consideration, yet if one gives thought to these proposals it is obvious that they are not satisfactory. A Council elected according to such a scheme could lead to something of the order of 50% of the profession being defranchised.

6. Every member of the association under the Council scheme would have to vote for at least six representatives of "special interests". Many of the candidates wishing to represent such "special interests" will be quite unknown to the majority of the members of the profession who are not members of the respective association which a particular candidate purports to represent, and it may frequently happen that votes from the general body of the profession would result in the election of candidates who are not acceptable to members of the various "special interests". Thus it is possible to defranchise such "special interests".

7. The election of candidates representing "special interests" as proposed by the Council's scheme would defeat the very purpose for which alteration in the method of election to Council was first advocated, namely, that the members of the Council should be in sympathy with the

members who elected them and could at all times put their case before Council.

8. The country and suburban associations could conspire to swamp the elections. Let us assume that between them they represent 50% of the electors. To simplify calculations, let us assume there are 1000 electors. Now if the country and suburban associations nominate between them 22 candidates and vote for them all, we have the following possibility.

Five hundred country and suburban votes give their 22 candidates 22 × 500 votes = 11,000 votes.

Five hundred general body votes have to be cast in the proportion of at least six per voter for "special interests", that is, 6 × 500 votes = 3000 votes.

Total votes for "special interests" = 14,000, leaving 8000 votes to be divided amongst those seeking election as "general body" candidates. So that by conspiracy 50% of the profession are thereby defranchised.

It may be argued that such possibilities are unlikely, but why have a system which by one means or another defeats the purpose for which change is sought, that is, more equitable representation?

My advice to the profession is to vote for the well-considered committee's scheme and thereby ensure sectional representation.

Yours, etc.,
F. S. HANSMAN.

143, Macquarie Street,
Sydney,
October 28, 1947.

SIR: As a member of the special committee appointed by the New South Wales Branch Council "to furnish a report to Council in regard to an alteration in the constitution of Council to provide for proportional representation", I feel I am justified in criticizing the explanatory brochure accompanying the plebiscite paper forwarded to all members of the New South Wales Branch.

The story of the representations to and the negotiations with the Branch Council is, within its limitations, correct, but the issuing authority has carefully withheld important and perhaps vital information. For example, consequent upon the representations made at the annual (1945) meeting of delegates of local associations with Council, a motion recommending the formation of a special committee was carried unanimously, and this motion closely followed a suggestion "which was in the nature of a recommendation of the Organization and Science Committee of the Council". Again, whilst the report of the special committee was a majority one, the story does not state who opposed the recommendation to Council. Nor does it mention that the meeting of delegates of local associations and special groups with Council on May 9 supported by a very large majority the recommendations of the special committee.

It would be most interesting to know who was responsible for the arguments in favour of the recommendations of the special committee. Whilst he has devoted 24 lines to the arguments in favour of the Council's proposal and against the committee's, six lines are generously given over to arguments favouring the committee's proposal and nary a line against the Council's.

Some of the so-called arguments in favour of the Council's suggestion are masterpieces of misstatement and inaccuracy. Thus "Under the present method members . . . are elected in a thoroughly democratic manner" is one excellent example; if the Council is of this opinion, then the method of election of the Council of the Parent Body which is elected in a manner similar to the recommendation of the committee is quite the opposite. Again in paragraph 2 (a) it is stated that "the purpose of the method of election recommended by the committee is to ensure majority representation on Council to local associations and special groups". As a member of that committee I give an emphatic denial to this blatantly incorrect statement. No one either in committee or in the various meetings I have attended has ever suggested this purpose, and it can only be in the imagination of the Council. Moreover, it has been definitely and consistently stated to Council by members of the special committee that it was never envisaged that local associations as such should have representation on Council. It was stated to Council and surely understood by them that proportional regional representation was the concept.

Finally members of local associations, public medical service officers and women members should note particularly that the Council's scheme which purports to give representation to them does not necessarily do so. It would be possible for endorsed candidates of these groups to be outvoted by unendorsed members; in point of fact no representative is elected by a group, a practice which is followed by the Parent Body.

Yours, etc.,
C. H. JAEDE.

Mascot,
New South Wales,
October 28, 1947.

Australasian Medical Publishing Company, Limited.

ANNUAL MEETING.

THE annual meeting of the Australasian Medical Publishing Company, Limited, was held at The Printing House, Seamer Street, Glebe, New South Wales, on October 22, 1947, Dr. W. L. Calov in the chair.

Directors' Report.

The report of the directors of the company was as follows.

The directors submit their report for the twelve months ended June 30, 1947, together with the balance sheet as at June 30, 1947, and the profit and loss account for the twelve months ended June 30, 1947.

THE MEDICAL JOURNAL OF AUSTRALIA continues to maintain its high standard, and this is a matter for congratulation to the Editor, Dr. Mervyn Archdall, who during the year completed his twenty-fifth year of service with the journal. Dr. Ronald Richmond Winton joined the staff of the journal in April, 1947, and after serving a probationary period was appointed Assistant Editor.

The result of the year's production in the printing and publishing department was satisfactory, but the company is still faced with difficulties in regard to manpower and paper.

Depreciation amounting to £773 was written off during the year and an amount of £2700 was transferred to the reserve for taxation. The company's reserves are used in the business, and we consider the state of the company's affairs is satisfactory.

Provision has been made for the payment of debenture interest for the year ended June 30, 1947.

Dr. W. L. Crowther and Dr. J. P. Major retire from office by rotation in accordance with the Articles of Association (Article 39). They are eligible and present themselves for reelection.

W. L. CALOV,
Chairman.

October 22, 1947.

Election of Directors.

Dr. W. L. Crowther and Dr. J. P. Major were reelected to the Board of Directors.

Australian Medical Board Proceedings.

NEW SOUTH WALES.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Practitioners Act*, 1938-1939, of New South Wales, as duly qualified medical practitioners:

McJannet, Alan Hugh Dalton, M.B., B.S., 1947 (Univ. Sydney), Balmain and District Hospital, Balmain.

McKenzie, William Lionel Cleeve, M.B., B.S., 1947 (Univ. Sydney), Royal South Sydney Hospital, Zetland.

McKessar, Jean Milne, M.B., B.S., 1947 (Univ. Sydney), Sydney Hospital, Sydney.

Mallett, Keith Charles, M.B., B.S., 1947 (Univ. Sydney), St. Vincent's Hospital, Darlinghurst.

Mandel, Eva, M.B., B.S., 1947 (Univ. Sydney), MacLaurin Parade, Roseville.

Manion, Marc Denis, M.B., B.S., 1947 (Univ. Sydney), District Hospital, Parramatta.

Marchbank, Muriel Joy, M.B., B.S., 1947 (Univ. Sydney), c.o. Box 434, Red Cliffs, Victoria.

Mattocks, Kyrle Maitland, M.B., B.S., 1947 (Univ. Sydney), Sydney Hospital, Sydney.

Melick, Roger Aziz, M.B., B.S., 1947 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Millar, Anthony Patrick, M.B., B.S., 1947 (Univ. Sydney), St. Vincent's Hospital, Darlinghurst.

Moore, Harry James, M.B., B.S., 1947 (Univ. Sydney), Royal Perth Hospital, Perth, Western Australia.
Morey, Harry Francis, M.B., B.S., 1947 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.
Morgan, John Patrick, M.B., B.S., 1947 (Univ. Sydney), St. Vincent's Hospital, Darlinghurst.
Morton, Max Robson, M.B., B.S., 1947 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.
Murray-Jones, Judith, M.B., B.S., 1947 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.

TASMANIA.

THE undermentioned have been registered, pursuant to the provisions of the *Medical Act*, 1918, of Tasmania, as duly qualified medical practitioners:

Lehmann, Geoffrey Maxwell, M.B., B.S., 1947 (Univ. Sydney), Launceston General Hospital, Launceston.
Ralston, Mary, M.B., B.S., 1947 (Univ. Sydney), Launceston General Hospital, Launceston.
Boscence, William Edward Bruce, M.B., B.S., 1937, M.S., 1947 (Univ. Adelaide), F.R.C.S., 1947 (Edinburgh), Hobart.
Gray, Alan John, M.B., B.S., 1937 (Univ. Melbourne), Hobart.
Kuhlmann, Herman Frederick, M.B., B.S., 1943 (Univ. Adelaide), Smithton.
Wilmot, Alice Elizabeth, M.B., B.S., 1945 (Univ. Melbourne), Launceston.

The following additional qualifications have been registered:

Hull, Eric Douglas, D.R.C.O.G. (London), 1946, Dip.O.G., L.M. (Dublin), 1947, Hobart.

Obituary.

HENRY GILBERT.

WE regret to announce the death of Dr. Henry Gilbert, which occurred on October 25, 1947, at Adelaide.

Notice.

THE Medical Secretary of the Victorian Branch of the British Medical Association announces that the ninth annual golf tournament of the Branch for the championship (the Weigall Cup), the handicap event (the Roseby Cup) and a spoon competition will be held at the Royal Melbourne Golf Club (East Course) on Wednesday, November 26, 1947. Entries for the championship and handicap close on November 13, and entry forms may be obtained on personal, telephoned or written application to the Branch Office, 426, Albert Street, East Melbourne, C.2 (telephone JM 1433).

Books Received.

"A History of the American Medical Association, 1847 to 1947", by Morris Fishbein, M.D., with the Biographies of the Presidents of the Association by Walter L. Bierring, M.D., and with Histories of the Publications, Councils, Bureaus and other Official Bodies; 1947. Philadelphia and London: W. B. Saunders Company Limited; Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 9¾" × 6¼", pp. 1234, with many illustrations. Price: 70s.

"Methods of Diagnosis", by Logan Clendening, M.D., F.A.C.P., and Edward H. Hashinger, M.D., F.A.C.P.; 1947. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 9¾" × 6¼", pp. 884, with many illustrations. Price: 94s.

"Cancer: Diagnosis, Treatment and Prognosis", by Lauren V. Ackerman, M.D., and Juan A. Del Regato, M.D.; 1947. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 9¾" × 7", pp. 1116, with many illustrations, some of them coloured. Price: 150s.

"Atlas of Cardiovascular Diseases: Correlation of Clinical Electrocardiography and Cardiac Roentgenology with Clinical History and Autopsy Findings", by Irving J. Treiger, M.D.; 1947. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 11½" × 8½", pp. 186, with many illustrations, some of them coloured. Price: 75s.

"A Textbook on Pathology of Labour: The Puerperium and the Newborn", by Charles O. McCormick, A.B., M.D., F.A.C.S.; Second Edition; 1947. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical) Proprietary, Limited. 9¾" × 6¼", pp. 534, with many illustrations, some of them coloured. Price: 64s.

Diary for the Month.

Nov. 11.—Tasmanian Branch, B.M.A.: Ordinary Meeting.
Nov. 11.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
Nov. 14.—Queensland Branch, B.M.A.: Council Meeting.
Nov. 17.—Victorian Branch, B.M.A.: Finance Meeting.
Nov. 18.—New South Wales Branch, B.M.A.: Medical Politics Committee.
Nov. 19.—Western Australian Branch, B.M.A.: General Meeting.
Nov. 20.—Victorian Branch, B.M.A.: Executive Meeting.
Nov. 20.—New South Wales Branch, B.M.A.: Clinical Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phœnix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federated Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health). Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

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